FEEDSTUFFS

The Weekly Newspaper for the Feed Industry

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Says Controls, Quotas Would 'Freeze' Poultry Production Patterns

WASHINGTON—The president of the Institute of American Poultry Industries, Chicago, testified here this week before the Senate Agriculture Committee on the omnibus farm bill that enactment of controls or quotas "would tend to freeze production patterns and would prevent the development and expansion of poultry production in areas where it could be produced economically."

The institute's leader, Harold M. Williams, said the emphasis in the poultry industry should be in the direction of market expansion and not in the direction of production or market restriction. "We have a product whose per capita consumption can be further substantially increased both at home and abroad," he remarked. "We feel that expanding sales, developing new markets and new products and lowering costs, rather than restricting production, is the way to continued growth."

Mr. Williams testified that the

(Turn to CONTROLS, page 95)

Purina Plans to Appeal Verdict Which Awarded $174,000 to Processor

MINNEAPOLIS — Ralston Purina Co. intends to appeal the verdict of a U.S. district court jury which awarded a Minnesota firm damages of $174,000 and absolved the firm from paying indebtedness of nearly $145,000 for which Purina had sued.

This was indicated this week by attorneys for the St. Louis firm.

Purina had instituted action to recover total alleged indebtedness of $144,580 from Lack Industries, Inc., Hopkins, Minn.—identified as having been a food broker, broiler processor and Purina dealer. In its answer and counterclaim, Lack Industries alleged it had sustained a net loss of $186,096 "as a result of its actions upon false representations of the plaintiff (Pur-

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FEEDSTUFFS *Features This Week*

LAYING FEEDS—A discussion of protein levels and methionine supplementation of feeds for laying hens is presented on **page 18.**

SORGHUM FOR SWINE—The need for a supplement to feed swine with grain sorghum to give the performance of corn is discussed on **page 26.**

CHANGING MARKET—This article tells of the significance of changes in the farm market to suppliers of farm production inputs. **Page 43.**

PEPSIN—A method for determination of pepsin in feed mixtures is presented on **page 46.**

FARM MIXING—The second of a series of articles on what feed men say about the threat of farm grinding and mixing appears on **page 65.**

GRADUATE STUDY IN FEED—This feature tells of the graduate study program in feed technology at Kansas State University. **Page 72.**

MANAGEMENT MYOPIA—Failure to see the need for planned marketing is described as a critical disease on **page 74.**

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Stable Livestock Prices Seen

WASHINGTON—Unusually stable hog and cattle prices are predicted for 1961 by the U.S. Department of Agriculture in its May livestock and meat situation report.

Cattle prices this year are expected to average close to last year's; hog prices probably will be lower this fall than they were a year earlier, but average prices for the year are likely to be above 1960 levels, and it is anticipated that sheep and lamb prices will be lower this year than last.

Recent developments in slaughter are more nearly in line with the level of cattle numbers and the current phase of the cattle cycle. And USDA livestock economists say the adjustment to prospective levels of production and prices during 1961 has probably been largely completed, and changes the rest of the year will be attributed to seasonal factors.

Both production and marketings of hogs are on an uptrend. USDA says hog slaughter will be seasonally smaller in the next several months but probably will pull ahead of year-earlier rates about midyear. Then, it is predicted, slaughter will continue above a year earlier at least through the first half of next year, probably totaling 6-8% larger during this period than in the preceding 12 months.

USDA believes that "improving economic conditions will support an increasing demand for all meat later this year."

Compared with a year earlier, January-March commercial meat production was 2% smaller than the first quarter of 1960. Beef production was up 2%, veal up 1%, lamb and mutton

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Corn Sign-Up Continues to Expand

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON—The U.S. Department of Agriculture reported this week that farmers have now signed up for diversion of approximately 14.2 million acres from corn planting under the 1961 Cochrane-Freeman feed grain program.

The acreage diverted was said to represent about 40% of the corn base on farms signed up.

The 1959-60 total average corn plantings in the U.S. were about 83.6 million acres.

The announcement of expansion of corn acreage diversion indicates that (with the Chicago market price reflecting not less than the country price plus transportation to the Chicago market) the top price for December corn may run as high as $1.35 to $1.37 bu. in the Chicago market. This sounds "crazy."

The difficulty in reaching this conclusion is that USDA has previously been committed to sell feed grains under the feed grain bill to compensate itself for payments and the cost of the higher price support level of $1.20 bu. on a national average basis.

Some officials indicated this week that they may not sell certificate corn under the feed grain program until mid-winter. This position has been

(Turn to CORN, page 99)

Hatch Still Ahead of '60, But Cut Seen

WASHINGTON — When you add the April egg-type chick hatch of 103,350,000—up 6% from a year earlier—to the hatches for the first three months of this year, the sum is 275,073,000, just about midway between the comparable months of 1960 and the same months of 1959.

The U.S. Department of Agriculture noted this week that the hatch of egg-type chicks January through April is 19% greater than last year, but below the 1959 period by 20%.

Hatchery output of all chicks during April is estimated by USDA at 319,669,000 — an increase of 18% compared with April of last year.

Production of broiler-type chicks in April, 1961, was at a record high level, up 25% from April, 1960, and output in the first four months of the year amounted to 765,935,000, an increase of 15% over the January-through-April period last year.

While the count of eggs in incubators May 1 indicates that the egg-type hatch in May will be smaller than in the same month of last year, the same indicator says May broiler-type will be up from a year earlier.

Though the egg-type hatch this

(Turn to HATCH, page 99)

Reports of Poultry In Government Aid Plan Discounted

WASHINGTON — Some observers here are discounting reports that the U.S. Food for Peace program may included exports of poultry products and that government-owned grain may be made available for feed use when poultry goes to the government for these special programs.

It has been indicated by some responsible U.S. Department of Agriculture officials that the "rumors" about including poultry products in the Food for Peace program are not substantiated.

While efforts are being made to stimulate exports of U.S. poultry products, others cite government subsidy and other programs aimed at moving U.S. grains to overseas destinations.

Some say that the conversation about possible U.S. poultry exports under the Food for Peace plan rep-

(Turn to POULTRY, page 98)

Committee to Study Testimony Presented At Rail Rate Hearing

By Special Correspondent

CHICAGO—More than 350 representatives of milling industries, including ingredient suppliers and feed manufacturers, assembled here this week for a three-day hearing of proposed changes in rail rates for grain and grain products shipped east of Chicago.

The hearing, conducted by the Eastern Railroads Executive Traffic

(Turn to HEARING, page 95)

AFMA Analysis Notes

Agribusiness Could Be Controlled Under Proposed Farm Legislation

CHICAGO—It is not likely that agribusiness could long remain uncontrolled if controls were developed for producers of various commodities as proposed under the new farm legislation which has been presented by the new administration in Washington.

This is pointed out as part of an analysis of the proposed new farm bill issued this week by the American Feed Manufacturers Assn.

"Many of the analyses of the proposed legislation have failed to consider the controls that could be exercised over agribusiness firms or 'handlers' of agricultural commodities," said W. E. Glennon, AFMA president, in a letter to members which accompanied the market research bulletin analyzing provisions of the bill. "This aspect is of particu-

(Turn to AFMA, page 99)

New K-State Milling Building Dedicated

By PAUL L. DITTEMORE
Feedstuffs Staff

MANHATTAN, KANSAS—Kansas State University's newly completed feed and flour milling industries building was formally dedicated here May 18, marking the successful completion of a joint program of more

(Turn to K-STATE, page 99)

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ABC AUDITED PAID CIRCULATION

NEP

The regional circulation of this issue is concentrated in the northwestern states

Top of the Hopper

CHANCES THAT THE ADMINISTRATION'S omnibus farm bill will pass without substantial amendment or even pass in any form are rated very slim at this point. To those who believed the proposal too preposterous to even merit serious consideration, this is a welcome development.

Certainly, some telling points have been scored in testimony against the measure by substantial producer organizations. For example, the American National Cattlemen's Assn. told the House committee that "like any other sellers in the market, cattlemen would be happy to receive higher prices for what they have to sell. However, experience with supported prices and controlled production on other commodities has taught us that these are not the roads to maximum service to customers or to the fullest potentials of economic well-being for our industry. We do not believe the complex cattle business can fully serve its market or advance its own welfare under any system of restrictive government licensing."

The position of the Institute of American Poultry Industries was presented to the Senate committee by Harold M. Williams, president: "The enactment of controls or quotas would tend to freeze production patterns and would prevent the development and expansion of poultry production in areas where it could be produced economically. I am sure all of you are aware of the tremendous expansion of the broiler industry in the entire South during the past few years, and the tremendous expansion of the turkey industry in Minnesota. . . .

"The poultry and egg industry has demonstrated its capacity to weather temporary difficulties and come out a stronger and more efficient industry. Its steady growth attests to this. And while at the present time we recognize we have some difficulties, we are confident we can surmount these with the help of innovators who will develop further efficiencies in production, processing and marketing. Under marketing orders and controls these improvements might well be discouraged."

THE AMERICAN FEED MANUFACTURERS ASSN. decided not to take an official position on the measure, believing it best to allow all the testimony time possible to organizations that represent producers directly. However, its current bulletin to members presents an analysis of the bill's possible effect on industry that sharply defines objectionable features of the proposal. Included in this analysis is the probability that controls would likely spread to agribusiness under any production control measures which might be adopted. "In many cases it might prove to be simpler to control a commodity by regulating a smaller number of agribusiness firms than to attempt to regulate a much larger number of producers," AFMA says.

The bulletin also raises the question as to which producers would be permitted to vote in any referendum, and the weight of each individual's vote. Would the broiler man with 3,000 birds have the same voting strength as the man with 1 million birds?

Dr. W. Lyle Fitzgerald, in his AFMA convention talk, raised a similar question in more dramatic terms, something like this: "Who is a broiler producer? A man with one chicken? Or a Socialist with a pot to cook the chicken in?" A flash of free association brought back thoughts of Castro's men plucking chickens in a New York hotel suite not too long ago.

IT LONG HAS BEEN SAID that nutrition knowledge has run ahead of management in particular and also, in some cases, breeding. Now, according to a leading poultry nutrition authority, it may be a question of nutrition's

(Turn to TOP OF THE HOPPER, page 100)

How's Business?

AN EVERY WEEK REVIEW OF FORMULA FEED BUSINESS VOLUME, INCLUDING PRICE, SUPPLY AND DEMAND TRENDS

There was a mixed tone to the feed business this week as regional reports on volume indicate that business varied from "seasonally good" to a "trifle slower."

Perhaps the brightest note in the volume category is the hog feed tonnage many manufacturers in swine areas are chalking up. Turkey feeds are moving well as the birds grow. And, broiler feeds move well because of the high level of broiler placements. However, birds were reported to have sold for as low as 12½¢ lb. in the southeastern area this week, 2½¢ below the 15¢ break-even price.

Weather continued to play a large role with conditions ranging from dry in areas like the Southeast to wet in the Ohio Valley where a 50-day rainy spell has just come to an end.

This week's wholesale feedstuff price index inched up from 87.8 to 88.0 compared with 74.6 for a year earlier.

The U.S. Department of Agriculture says that the feed-grain index climbed to 64.6 compared with 64.0 the week before and 67.8 a year ago. Based on Chicago prices, the hog-corn ratio was 14.7 this week as compared with 14.9 last week and 13.2 a year earlier. (Major feed market review and ingredients quotations on pages 96-98.)

Northwest

Feed business in the Northwest was on a mostly steady to slightly off basis as compared with last week. Some manufacturers indicated that their volume was not off so much that a strong finish of the month would not bring them up in line with the previous month's volume.

One manufacturer reported sales this month are 15% over those for the corresponding number of days in May, 1960.

Accounting for a big share of the feed tonnage were turkey and hog feeds. Feed men feel that favorable prospects for summer hog prices are encouraging to the hog feeders.

Prices are expected to range from steady to off $1.50 to $2.

Southwest

Feed business in the Southwest showed some improvement again this week with mills getting a full five day operation and several of the large adding a Saturday run. Most mills are operating two shifts but one large unit was reported as going to a three-shift operation this coming week. Backlogs of orders are not heavy but are improved over the situation that has prevailed for the past few weeks.

The major portion of the run this week was again taken up with turkey and broiler feeds and most mills report that shipments of grower rations are stepping up and should be sizeable in a few weeks.

Shipments of starter rations and layer feeds are still contributing a worthwhile share of the total as are hog feeds. There were reports that hog concentrates have slowed up to some extent.

Formula feed prices will be slightly lower, reflecting the lower prices of several major ingredients.

Northeast

Mixers' business held steady with the previous week's downturn as consumers bought on a hand-to-mouth basis while they awaited the arrival of the grass season.

Tonnage, however, held up because egg mashes are going well and growing feeds "are coming along fine."

Farmers were tempted to put their cattle out to graze after four days of sunny, 80-degree weather, but heavy rains prior and after the warm spell deterred them because of possible damage to the pastures.

The 14% protein feed that mixers are offering to supplement the diet of grass-fed cows is moving just so-so. But it is expected to gain in volume when the grass dries up and becomes less palatable and nutritious.

Prices of end products were slightly irregular. Eggs were off 1 to 1½¢, broilers edged up ½¢ lb. to the 14-14½¢ level, but one spokesman said, "Nobody will get rich on those prices." Milk in the western New York area held at $4.01 cwt. for April, marking the first time in a year that the base price of milk did not fall below that of the corresponding month of the prior year.

Running time of some feed manufacturers averaged 36 hours this week, unchanged from the preceding period.

Southeast

Poultry feed business in the southeast continues to be reported as very good and mills are operating at above normal, which is all due to greater number of broilers on feed.

The market is very depressing and many are concerned about the future. Broilers sold as low at 12½¢ lb. last week f.o.b. the farms with only a ½¢ improvement this week. Good operators, who are completely integrated, have been operating at a loss for the last five weeks as the prices of broilers have been anywhere from 1¢ to 2½¢ under the conversion price of 15¢.

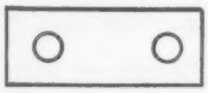
Dry weather in many sections is drying up pasture and dairymen and cattlemen are having to step up their usage of feeds for their herds. Most of the major feed ingredient buyers continue to buy their major proteins on an as-needed basis as they believe there will still be a further decline before the markets change to the higher side during the late summer months.

Many of the citrus processors are winding up their operations for this season and citrus pulp is fast getting into strong hands of the major processors with good storage facilities and all indications point to higher prices for citrus pulp during the summer and early fall.

Central States

This week in the formula feed trade in Central States had much in common with that of ones just preceding. If anything, it appeared to be just a trifle slower. But, in the final analysis, this modest letdown in sales volume was hardly sufficient to become a market factor. Pastures in this section generally are lush and as a result the demand for cattle feeds has slumped to some degree. Hog markets have held up fairly well with

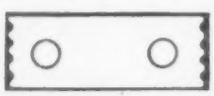
(Turn to MARKETS, page 101)



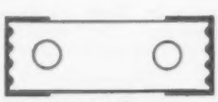
Strap Hammer. Heat treated, not hardfaced.

Strap Hammer with hardfaced ends.

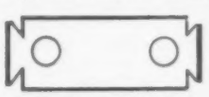
Strap Hammer with hardfaced ends and edges.



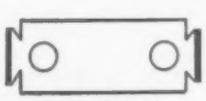
Serrated Edge Hardface Hammer with hardfaced ends



Serrated Hammer with hardfaced ends and edges. 50% more Tungsten-carbide.



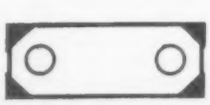
Single Notched Double End Hammer hardened, not hardfaced.



Single Notched Double End Hammer with hardfacing.

Notched Hammer hardened, not hardfaced.

Notched Hammer with hardfaced ends.



Capped Hammer has corners hardfaced.

Clustered Hammers

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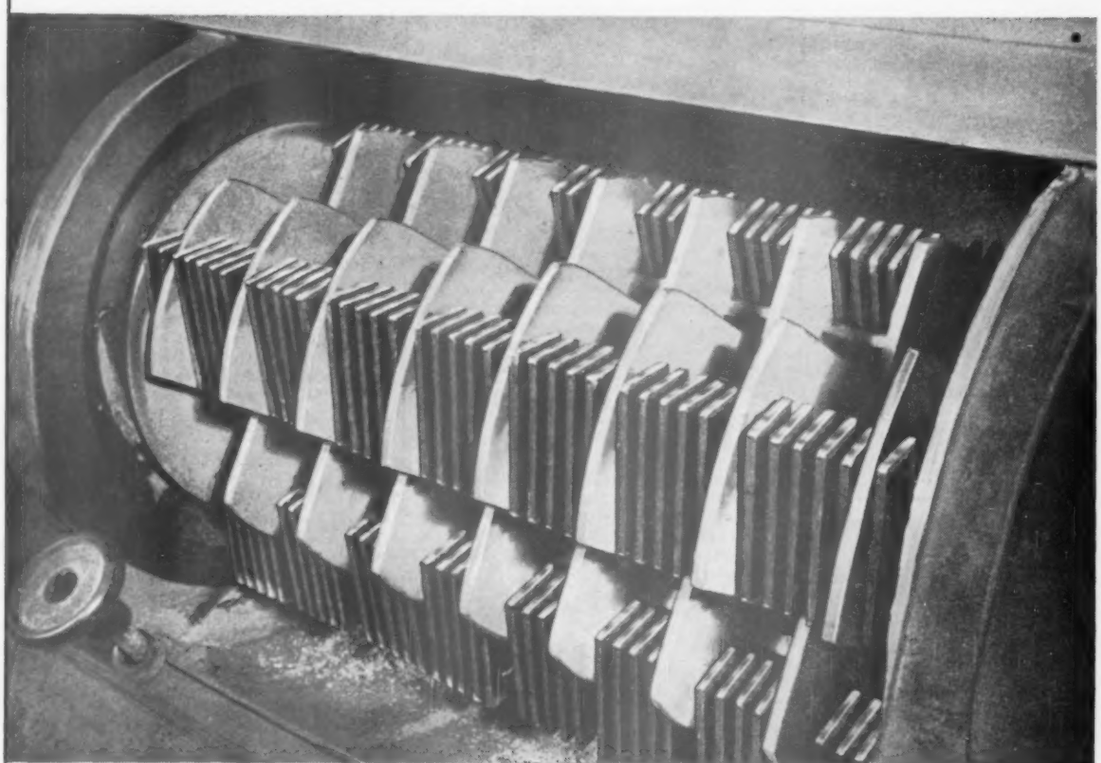

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Missouri Association Calls for Simplification of FDA Rulings

ST. LOUIS—The Food and Drug Administration this week was urged to "simplify its rulings to the point that any feed mixer or feeder can readily comprehend and easily comply with them, without confusion or misunderstanding."

The statement on FDA regulations was part of one of several resolutions adopted by the Missouri Grain & Feed Assn. at its annual convention May 14-15 at the Coronado Hotel in St. Louis.

The association also urged national trade associations to "expend every effort to get the Delaney amendment repealed and the Food and Drug legislation revised to the point that common sense and integrity can again replace arbitrary and unreasonable FDA rulings and regulations."

Registration at the meeting was 140.

The group also heard several talks, including one on the changes in the grain and feed industries as a result of agricultural changes. The speaker, from the Federal Reserve Bank, said, for one thing, that it is "likely that more prices with both dealers in farm products and suppliers of production items will be negotiated as one factory negotiates with another today."

RESOLUTIONS—A resolution urging the Food & Drug Administration to "simplify its rulings to the point that any feed mixer or feeder can readily comprehend and easily comply completely without confusion or misunderstanding" was among several passed at the Missouri convention.

The FDA resolution reads as follows:

"Whereas, the country feed mixer is badly confused over the rulings and restrictions of the U.S. Food & Drug Administration, and

"Whereas, the country feed mixer would like to cooperate in making feeds which offer the feeder the best in nutritional and safe developments, and

"Whereas, present complicated, controversial, confusing and involved rulings and restrictions discourage production and use of the most efficient feeds and feeding practices,

"Therefore, be it resolved that, through the Grain & Feed Dealers National Assn. and the American Feed Manufacturers Assn., the FDA be urged to simplify its rulings to the point that any feed mixer or feeder can readily comprehend and easily comply therewith, completely without confusion or misunderstandings.

"Furthermore, be it resolved that the above two national associations expend every effort to get the Delaney amendment repealed and the FDA enabling legislation revised to the point that common sense and integrity can again replace arbitrary and unreasonable FDA rulings and regulations."

Another resolution called for review of the new lower government storage rates with the idea of reinstating the original rates. The resolution said that because of increased costs, the lower established rates are conflicting with the possibility of the country warehouseman's finding the storage of government grains to be of advantage.

The association also urged continuation of the Commodity Credit Corp. policy of fully utilizing all segments of the grain industry for handling, sale and storage of its grain stocks.

In another resolution, members were urged to develop, individually,

(Turn to MISSOURI, page 95)

POULTRY PRINCESS—Miss Gene Chambers, Arkansas' 1960 Poultry Princess, is shown with a tray of tastefully prepared Arkansas poultry products which she presented to Gov. Orval E. Faubus, who proclaimed May 13-June 12 as "Poultry Month in Arkansas." During the month-long event the Arkansas Poultry Federation will select the 1961 Arkansas Chicken Cookin' Queen, and also the 1961 Arkansas Poultry Princess, who will serve as Arkansas' nominee to the Miss Universe Contest. Winners of these two titles will be honored by the federation at a poultry festival and coronation banquet in Little Rock June 9-10.

Still Negotiating Corn-Alcohol Deal

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON—The U.S. Department of Agriculture still is negotiating a contract document with major distillers for purchase of corn stocks on a bid basis.

It is understood from USDA officials that the USDA tender will require a renegotiation of contracts of profits over and above 2% after taxes, but there is a roadblock in the way of how the by-product recovery of distillers dried grains and solubles may be priced and also how carryback tax provisions of the bidders may be contemplated in the accepted contract.

Last month (Feedstuffs, April 22, page 1), the Commodity Credit Corp. board of directors approved the sale of 15 million bushels of corn from CCC stocks on a bid basis for production of certain types of industrial alcohol. As yet, however, there has been no announcement of calls for bids.

It appears that negotiations are being held up because USDA hasn't been able to resolve the problems involving the pricing of the distillation feed by-products and tax provisions.

Perhaps a White House intervention may short cut the obstacles of any eligible distiller who wants corn from U.S. stocks at a reduced rate, in place of Cuban molasses receipts, for some industrial alcohols.

Broiler Hatcherymen Trim Back Egg Set

SALISBURY, MD. — Hatcherymen across the nation trimmed their broiler egg set last week back to 56,935,000. This was 2% below the previous week and only 4% above the corresponding week a year ago.

Settings were down from the previous week in 14 of the 22 states. States reporting sizeable decreases were Mississippi, Georgia, Virginia, Indiana and Missouri.

Chick placements in the 22 states totaled 43,670,000 chicks. This was 2% below the previous week, but 12% above the corresponding week a year ago. Decreases were reported for 11 states compared with the previous week. States showing appreciable decreases include Alabama, North Carolina, Georgia and Arkansas.

Delmarva is closely following the national trend in a cutback, according to the Maryland-Delaware Crop Reporting Service. Producers in the area reported 4,596,000 chicks during the week ending May 13. This was 2% below the previous week, but 4% above the corresponding week of last year. Placements in Delaware were up 2% and Maryland placements were up 6% when compared to the same week a year earlier. Settings in Delmarva were 3% below the previous week and 8% below the comparable week last year.

The price in Delmarva improved slightly last week. The average price paid on the farm was 15.21¢, compared to 18.48¢ a year earlier.

Supersweet Feeds to Build Research and Quality Control Center

MINNEAPOLIS—Construction will begin June 1 on a new research and quality control center to be built by the Supersweet Feeds division of International Milling Co. It will be located on the company's research farm at Courtland in southeastern Minnesota.

The center is expected to be completed by September, according to Dr. Lynn G. Blaylock, director of research and animal nutrition for Supersweet.

The new building will bring together Supersweet's research and quality control facilities and will consolidate its technical and scientific libraries.

Plans call for a research and quality control laboratory, a technical library and auditorium, an office for the company's scientific staff, a mixing room for special formula feeds, and two battery rooms for conducting feeding experiments on chicks and turkeys.

The laboratory will be equipped with modern scientific equipment to enable Supersweet to expand its comprehensive program of testing both ingredients and finished formula feeds.

In addition to the research and quality control center, present facilities on the farm include a modern turkey brooder house and a large pole barn for raising turkeys, a breeding herd unit, a sow farrowing and nursery unit and an experimental cattle unit.

Supervising the operation at the farm is Dr. Lyle Neagle. The new laboratory will be under the direction of John Enyart, who has been directing the firm's laboratory in New Ulm, Minn., since 1958.

"The new center is another step in our program of research and quality control designed to produce the best scientifically-balanced feeds possible," said Dr. Blaylock.

The research farm provides services for all ten of International Milling's Supersweet Feeds mills located at New Ulm and Willmar, Minn.; Des Moines, New Hampton and Le Mars, Iowa; Fremont and Grand Island, Neb.; Salina, Kansas; Monmouth, Ill., and Madison, Wis.

April Poult Hatches Show Big Increases From Month in 1960

WASHINGTON—The April, 1961, hatch of heavy white breed poults was, at 4,908,000, up 45% from a year earlier, and for other heavy breed poults, mostly Broad Breasted Bronze, the hatch of 15,069,000 was up 14%, the U.S. Department of Agriculture reported this week. Light breed poult hatchings also showed a major increase. The April hatch was 1,570,000, a gain of 43% from a year earlier.

USDA says the hatch of all poults (all breeds) during January through April of this year totaled 56,225,000 —27% greater than the 44,140,000 poults hatched in the same months last year.

For the first four months of 1961 the hatch of heavy white breed poults was up 60% from a year earlier; other heavy breeds were up 19%, and the hatch of light breeds increased 24%.

Turkey eggs in incubators on May 1 indicate that expansion in poult production will continue this month. The May 1, 1961, count of 34,136,000 heavy breed turkey eggs in incubators was about 27% higher than the year-earlier inventory. Light breed eggs in incubators May 1 of this year were set at 2,815,000, about 20% above the year-earlier count.

The percentage differences between this year's month-by-month hatchings of heavy white and other heavy breed poults and those of last year were much less in the more important month of April than in January and other earlier months of the year.

Egg Market Turns Weak; Broilers Up

WASHINGTON—The nation's egg markets were generally weak during the week ended May 17, with excessive offerings in most markets due to lighter buying interest and increased supplies, according to the U.S. Department of Agriculture. Prices ranged 1 to 4¢ lower.

Broilers advanced ½¢ in Georgia, Alabama and Mississippi during the reporting period of USDA, and farm prices were mostly 13½¢ throughout the southern growing area. Available supplies throughout the area were closely cleared and short in instances for a relatively good processing demand, USDA said. Delmarva prices were slightly lower and averaged 15¢.

Turkeys were generally steady to firm, with much of the strength emanating from holiday demand, according to USDA. Consumer size toms were offered sparingly as stocks dwindled and little of the new crop has made its appearance yet.

USDA says that current asking prices on hens have failed to interest large volume buyers for holiday feature; but, institutional demand for toms continues brisk with some uneasiness in the heavy sizes.

Minnesota prices at the farm were reported as follows: Young hens, 22½@23½¢; young toms, 19@21¢; fryer-roasters, 21@22¢, and breeders, 15@16¢.

Donn D. Early Joins Cincinnati Ad Agency

CINCINNATI — Donn D. Early, feed division manager, The Early & Daniel Co., feed manufacturer, has resigned to become a partner and executive vice president with the Richard G. Peck Advertising Agency of this city.

During his 16 years with Early & Daniel, Mr. Early also had served as manager of sales and advertising.

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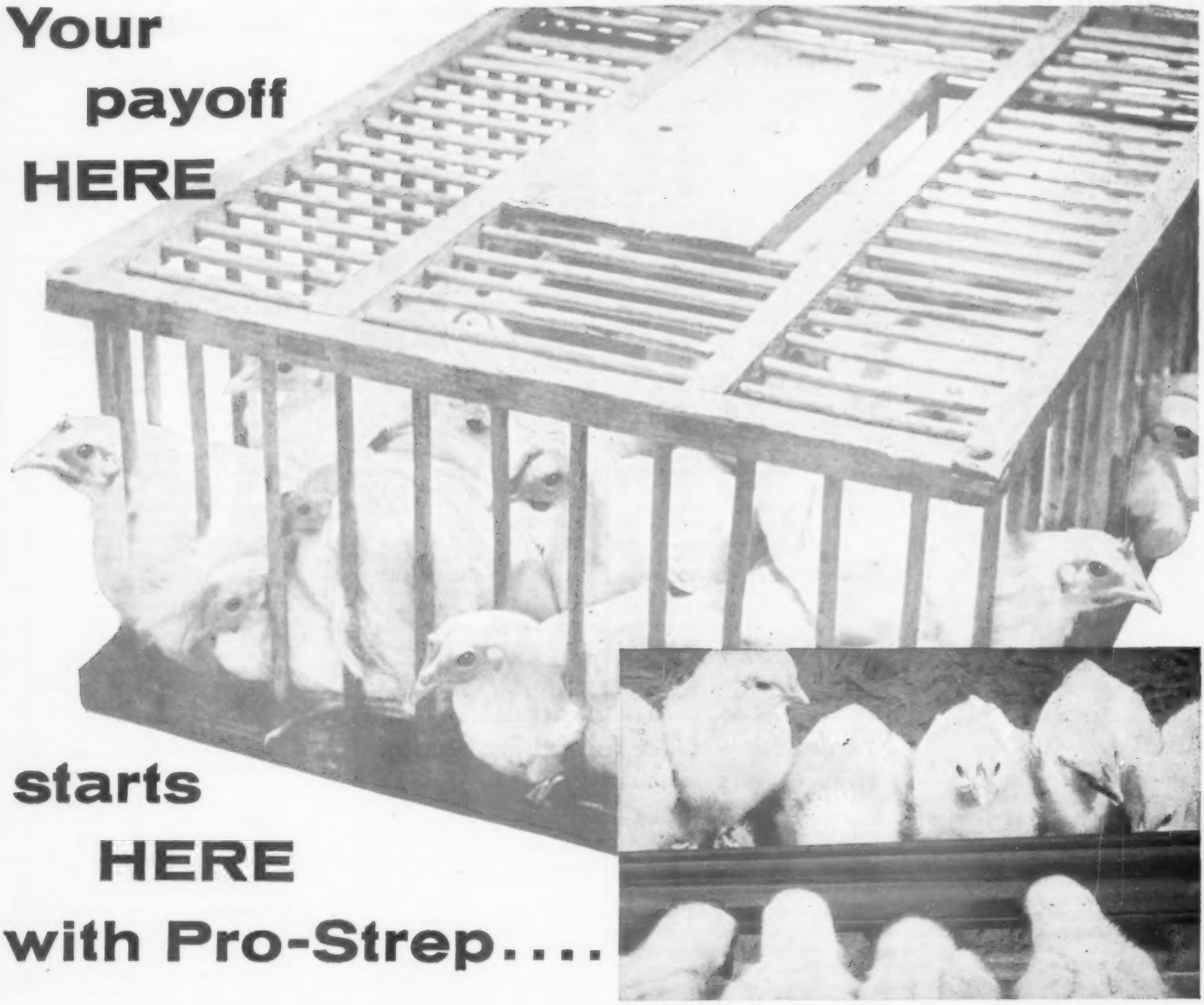

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Kansas Researchers Report Livestock Feeding Studies

By MYRON McCARTOR
Kansas State University

MANHATTAN, KANSAS — Approximately 1,000 Kansas livestockmen heard reports on the past year's experimental studies at Kansas State University's 38th annual Livestock Feeder Day, May 6.

Animal scientists at K-State reported on studies with cattle, sheep, swine and meat. Reports ranged from practical studies on methods of managing bluestem pastures to studies on the value of enzyme preparations in cattle rations.

Harvey McDougal, Collinsville, Cal., feedlot operator who feeds 38,000 to 40,000 cattle annually, told the stockmen that feeding business is changing rapidly. Mr. McDougal predicts larger feedlots marketing cattle year around rather than farmers feeding out two or three cars at a time and marketing a couple of times each year. "Larger operators can do a better job. Not from the standpoint of actually feeding better, but a large feeder can do the job more efficiently and feed for less," said Mr. McDougal. He said two neighboring feeders who normally feed about 5,000 brought their cattle to him last year because he could do the job cheaper.

The California feeder is quite concerned about the possibility of cattle coming under government controls, and said, "I don't want to see any more government control than we have now."

Research Reports

Nearly 80% of the 34 studies reported dealt with beef cattle on pasture and in the feedlot.

Dehy and Vitamin A—In a wintering trial with beef heifers, dehydrated alfalfa hay appeared to boost gains more than similar lots receiving 10,000 I.U. of vitamin A palmitate daily in the ration. The cattle were in a study comparing forage sorghum with grain sorghum as a source of roughage. At the completion of the wintering trial the cattle were placed on a fattening ration in which dehydrated alfalfa is being compared with vitamin A palmitate as a source of vitamin A. Drake Richardson, who is in charge of the study, reports the cattle on the dehy are continuing to outperform those on the synthetic vitamin A.

Trace Minerals in Roughage Ration — A commercial trace mineral mix appeared to have little value when made available free choice to wintering steers on a ration of sorghum silage and alfalfa hay. In the same study, which was designed to study the effects of concrete lots and shelter, the sheltered steers on concrete gained significantly faster than those on dirt without shelter. This surprised researchers somewhat because the winter at Manhattan was unusually mild.

Enzyme Study — In an enzyme study, neither amylase, protease nor cellulose enzyme preparations added to the ration of wintering beef cattle gave increased gains.

Corn Drying—Wet corn was dried artificially by three different methods to determine what effect high temperature drying would have on feedlot performance. The corn was dried with forced air with no heat; dried in a batch drier at 180° F., and batch dried at 230° F. None of the methods seemed to affect rate of gain; however, the corn dried at the high temperature appeared to be less palatable.

Cobalt Bullets—The need for additional cobalt for steers either on pasture or in the feedlot seems doubtful from the results of a series of pasture and feedlot tests at K-State. One half of the animals in each lot received a 20 gm. cobalt bullet, placed in the rumen. There was no significant difference in the rate of gain on pasture and only one case of significant difference in the feedlot. This was with a corn, sorghum silage and soybean oil meal ration. Cobalt analyses of pastures and ingredients used in tests at Manhattan and Fort Hays did not indicate a cobalt deficiency.

Ratios of Grain Sorghum to Dehy—In a study with five different ratios of grain sorghum to dehydrated alfalfa fed as a complete pellet, the following observations were made: Average daily gain increased as the alfalfa portion of the pellet increased; average daily feed consumption increased as the pellet increased in alfalfa content, and carcass grade decreased significantly with the higher proportions of alfalfa in the pellet. Feed efficiency also decreased with higher levels of alfalfa. The grain sorghum-alfalfa ratios varied from 90:10 to 10:90.

Soaking Grain—The age-old practice of soaking grain for pigs seems to be of doubtful value, judging from an experiment by C. E. Aubel with soaked sorghum grain. Pigs receiving the soaked grain made no faster gains and used a little more feed per 100 lb. of gain than the pigs on dry sorghum grain.

Pelleting Study with Lambs—In a pelleting study with lambs, a pelleted

(Turn to KANSAS, page 100)

Feed Group Told That Industry Must Help Curb Unemployment

By PAUL CROCKETT
Feedstuffs Staff

MINNEAPOLIS — The continued increase in unemployment, with much of it being attributed to automation, must be met with help from industry as well as government, members of the Northwest Feed Manufacturers Assn. were told at a recent meeting here.

John P. Baird

Speaking before the group was John P. Baird, manager of labor relations and production personnel for the Ralston Purina Co., St. Louis.

Mr. Baird said that in the next 12 months, 1,300,000 new workers will enter the labor field looking for work, and during that same period, 1,900,000 persons will be displaced from their present jobs by automation.

"Added to the country's present unemployment of 6 million, we'll have close to 10 million persons looking for jobs by the end of the next 12-month period," he said.

Mr. Baird stated that automation is picking up momentum, especially in the area of white collar workers, and it's not just going half-way it's

(Turn to UNEMPLOYMENT, page 101)

NBC Unveils Retailer Advertising Service

ATLANTA, GA. — The National Broiler Council's "retailer advertising service" was unveiled at a recent board of directors meeting in Atlanta.

The newest phase of NBC's merchandising program is designed to the specifications requested by the retailers in the study conducted last fall. Full color and duo-tone mats are featured in addition to regular black and white mats and photoprints. Line art of chicken in different sizes is also available. Suggested headlines, copy blocks highlighting the goodness of chicken, and recipes wrap up all the services available to the retailer in this new NBC program.

Committee Reports

The NBC board heard reports from various committees including the latest addition to the NBC committee roster, the research committee. Jack Prince of Gainesville, Ga., reported in the absence of Dr. L. A. (Tiny) Wilhelm, committee chairman. Mr. Prince reported on the initial meeting of the group held in Washington where it attempted to define the industry's greatest needs in market research and give proper priority to them. A procedure was developed which will be used to get the research started.

The board approved plans for the NBC annual conference to be held in Jackson, Miss., in mid-October. A preview of the 1962 NBC programs will be the basis for the conference agenda.

Joe Frank Sanderson, NBC president, Laurel, Miss., commented that "there was more progress presented to the board at this meeting than ever before." He noted that income received during the first quarter of 1961 under the set-aside plan for NBC members climbed to new record levels.

The next board meeting will be in Hot Springs, Ark., July 17.

NBC RESEARCH COMMITTEE—The National Broiler Council's research committee (pictured here) met recently in Washington to define the most critical broiler marketing problems currently facing the industry, and to review research projects now in progress which have a bearing on these problems. The group also studied new areas of broiler marketing research which should be initiated and the existing areas of research which should be strengthened. A procedure was developed which will be used to get research started. In session are, left to right, Charles Wampler, Jr., Harrisonburg, Va.; Bruce Failing, Cayuga, N.Y.; Robert L. Hogue, Lafayette, Ind.; Dr. L. A. (Tiny) Wilhelm, committee chairman, Chicago; L. D. McGehee, Choudrant, La.; Dr. Robert J. Krueger, Richmond, Va.; Dr. Kent Christensen, Washington, D.C.; and Jack Prince, Gainesville, Ga.

Honeggers' Equipment Plant Sold to Brandex

FAIRBURY, ILL. — Honeggers' & Co., Inc., has announced the sale and disposition of its Taylorville, Ill., plant to Brandex Corp. of Chicago, which will manufacture grain bins, bulk feed tanks, and related equipment under the trade name Brandex.

In a previous statement, Honeggers announced the sale of tools, dies, jigs, and fixtures for the livestock and poultry phase of its Taylorville business to James Mfg. Co. of Ft. Atkinson, Wis. James is a manufacturer of livestock and poultry equipment, milking machines, incubators, power-choring equipment, etc. The tools, dies, jigs, and fixtures for the livestock and poultry equipment purchased by James will be moved to Ft. Atkinson. Transfer of the two phases of the business to James and to Brandex is to be effective June 1.

Honeggers will continue to merchandise grain bins and bulk feed tanks produced at Taylorville by Brandex and will merchandise the full and complete line of Jamesway hog and poultry equipment.

"Production workers, numbering 75 to 80, at Taylorville under a contract with the Allied Building Workers Union AFL-CIO, will be reduced to fit the grain bin and bulk feed tank manufacturing requirement," officials said. "Under the union contract the men did not participate in the company's profit sharing trust. With so much talk today about the benefits of unionism, this is an interesting sidelight to the Honegger operation since all other employees in six other plants and offices do participate in the company's profit sharing trust plan. The company's contribution has averaged $220 per employee per year over the past nine years to non-union employees."

Plant Not Profitable

Honegger officials state that the Taylorville operation has not been profitable for the company and its disposition of the plant, property, and manufacturing operation at that location is in line with the company's policy to discontinue and dispose of any operations that are not profitable.

While the sale price of the two transactions was not announced, it is understood that the transactions, including plant, property, and inventories, exceed $750,000. The money thus received will be used by the Honegger company to increase working capital and improve its cash position, officials said.

'Bulk Fair' Planned June 15-16 in St. Paul

ST. PAUL — Plans have been announced for the Midwest Bulk Fair, at which bulk handling and other equipment will be shown. The event will be held June 15-16 at the Minnesota State Fairgrounds in St. Paul.

Sponsors of the fair said that feed dealers and manufacturers, feeders, contractors and others are invited to attend the "parade of profit-making ideas and equipment." Admission is free.

More than 50 equipment manufacturers will show and demonstrate such things as bulk trucks, wagons and carts; bulk storage tanks; conveyors and elevators; feedlot automatic feeding equipment; trucks for bulk bodies; automatic feed mills for farms, and various other pieces of machinery and equipment.

The fair will be open for two full days.

WISCONSIN FIRM BURNS

BASSETT, WIS. — Fire destroyed the one-story Al Lois Feed & Seed store here, causing damage estimated at between $150,000 and $200,000. Cause of the blaze was not determined.

Chick-n-Que Promotion Starts 5th Consecutive Year in Late June

RICHMOND, VA. — Chick-n-Que, the popular summertime promotion, will make its 1961 debut in late June, according to National Broiler Council. This related-item promotion designed to capitalize on the expanding popularity of cooking out-of-doors is starting its fifth consecutive year of growth and progress.

Built around the same basic framework as previous campaigns, Chick-n-Que, 1961, will tie-in broiler-fryers with Mazola corn oil in the latest version of the event that has already won three "Top Promotions of the Year" awards.

In addition to a complete and practical in-store merchandising kit, Corn Products Co., manufacturer of Mazola, will support the promotion with a full page ad in the June 30 issue of Life magazine.

Through its consumer education program, NBC will supplement the advertising and in-store efforts with Chick-n-Que material aimed at national magazines and newspapers. Industry suppliers and broiler processors will promote the campaign on a local and regional level.

The unprecedented consumer and retailer acceptance of past Chick-n-Que promotions can be traced to the growing popularity of outdoor eating, the support of the cooperating food organizations, the growing leisure-time market, and the versatility of broilers themselves. As this meat can be broiled, barbecued, fried, roasted, baked, stewed, etc., it lends itself to the widest variety of outdoor, as well as indoor, cookery.

The Chick-n-Que offers retailers a fine opportunity to tie-in picnic foods and supplies. To facilitate this aim, the dealer's kit will contain shelf talkers designed to appear in different departments throughout the store to lend a store-wide dimension to the promotion.

Besides shelf talkers, soft-sheet posters will be supplied. A Mazola topper card is furnished to rise above a central display including recipe folders (with 15 different outdoor recipes) and a Chick-n-Que price list with space for listing and pricing eight related items. Completing the kit are five advertising mats for placement in local newspapers and a sales brochure outlining the entire promotion.

New Mexico Fire Levels Half Block of Buildings

ROSWELL, N.M.—A fire of undetermined origin, which started behind the Mitchell Seed & Grain Co. here, has leveled half a block of business buildings in downtown Roswell.

A preliminary estimate of damages to all the buildings was set at $300,000. No separate breakdown is available for the feed and seed firm.

The fire was discovered at the rear of the Mitchell property during the evening of May 13. Brisk winds spread the flames throughout the buildings and on to nearby structures. Fire-fighting units from nearby Walker Air Force Base were called to help city firemen. The buildings were destroyed by flames within an hour, but firemen then had a 16-hour battle to keep the embers under control.

Bartlett Purchases Elevator in Iowa

KANSAS CITY—Frank W. Bartlett, president of Bartlett & Co., Grain, this week announced the purchase of the 2½ million bushel grain elevator at Council Bluffs, Iowa, from the Chicago, Great Western Railway.

The elevator has been leased to the Updike Grain Corp., Omaha. Bartlett & Co. will take over Aug. 1.

Red Comb Mills' Hourly Employees Vote Out Teamsters

WILMINGTON, DEL.—The hourly employees of Red Comb Mills, Inc., here, a subsidiary of Hales & Hunter Co., Chicago, have voted out the Teamsters as their bargaining agent.

The May 2 referendum resulted from an employee petition to the National Labor Relations Board for a decertification election to determine whether or not the Highway Truck Drivers and Helpers, Local 107, of the National Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers of America should continue to be their bargaining representatives.

The initial contract which Red Comb signed with the Teamsters in December, 1958, expired last August. Negotiations continued, but no contract was signed. This April the employees filed the petition for decertification.

The law provides that the Teamsters, or any other union, may not petition the board to act as representative of the employees for a year following the May 2 election.

Chemical Name Not Required in Labeling

KANSAS CITY—Alfalfa dehydrators and feed manufacturers who use the antioxidant ethoxyquin (Santoquin) no longer are required to show on their tags, bags or registrations the long chemical name of the product — 1,2-dihydro, 6-ethoxy, 2,2,4-trimethylquinoline.

During the recent American Feed Manufacturers Assn. convention in Chicago, Food and Drug Administration officials advised dehydrators, feed manufacturers and feed control officials that they have no objection to the dropping of the unwieldy chemical name.

With the FDA clearance for use of ethoxyquin in feeds for all animals and poultry, and the placing on the market by Monsanto Chemical Co. of a water-miscible Santoquin emulsion, the dehydration industry has turned to its use enthusiastically as a preservative of the carotene and xanthophyll content of dehydrated alfalfa, according to the American Dehydrators Assn.

In a recent survey conducted by the ADA, it was found that approximately 664,000 tons out of 733,000 tons reporting would be treated with Santoquin in the season that is just starting. This represents about 90% of the total tonnage reporting.

If this percentage can be applied to total anticipated tonnage, it would indicate treatment of over a million tons of dehydrated alfalfa in the 1961-62 crop year, the ADA said.

C. H. Schrader Joins Eastern States Staff

WEST SPRINGFIELD, MASS.—Charles H. Schrader, formerly a buyer for Ralston Purina Co. at its feed mills located in Bloomington, Ill., Guntersville, Ala., and Richmond, Ind., has joined the feed production staff of Eastern States Farmers' Exchange, according to an announcement by the cooperative.

He is associated with Russell Hayes in feed ingredients purchasing and is located in the cooperative's Buffalo feed mill.

Mr. Schrader is a 1953 graduate of the University of Illinois.

$200,000 EGG PLANT

NEW HAMPTON, IOWA — The A&P Co. has signed a contract with the New Hampton Development Corp. to operate an egg procurement plant here. The $200,000 plant, 80 by 220 ft., will be built by the Stolz Construction Co. of New Hampton and will be completed by Nov. 1. It will employ 30 people.

Elect David O. Wentzell Nutrena Vice President

MINNEAPOLIS — David O. Wentzell has been elected vice president of Nutrena Mills, Inc., by the firm's board of directors, it has been announced by James C. North, company president.

David O. Wentzell

Mr. Wentzell, since 1957 an assistant to Mr. North at Nutrena's headquarters here, assumed the vice presidency in connection with his appointment to director of a newly-formed staff unit of the animal feed manufacturing firm (Feedstuffs, May 13). Duties of the unit will include purchasing, traffic, feed formulation, quality control and pricing.

Mr. Wentzell joined Cargill, Inc., parent firm of Nutrena, in 1945, following courses in business administration at North Dakota State College and the University of Minnesota. He worked in Cargill grain merchandising posts at Sioux City, Iowa; Chicago and Minneapolis before his association with Nutrena.

Revamped Marketing Announced for Morea

NEW YORK—Feed Service Corp., Crete, Neb., inventor of Morea® liquid feed supplement for ruminant animals, and U.S. Industrial Chemicals Co., which has been manufacturing and distributing it in the East and Far West, have announced a marketing reorganization for the product.

Beginning June 1, Feed Service Corp. will market the liquid premix to mixer-distributors throughout the U.S. U.S.I. will continue to manufacture the product in plants at Tuscola, Ill., and Anaheim, Cal.

Field service personnel, formerly representing U.S.I., will now report to Feed Service Corp.

According to Philip Anderson, president of Feed Service Corp., sales assistance to mixer-distributors, including technical service, advertising and sales promotion, will be centralized at Crete.

Iowa Workshop Set

AMES, IOWA—Planning for 1966 is the theme for the fourth annual managers' workshop for elevator and farm supply businesses May 22-23 at Iowa State University here.

Emphasis throughout the workshop for experienced managers will be on 5-year projections and planning involving margins, competition, facilities, personnel, capital requirements and sales. Warren W. Winslow, commodity manager, Merrill Lynch, Pierce, Fenner & Smith, Inc., Des Moines, is work committee chairman, and Dr. Richard Phillips, Iowa State University, secretary.

Many of the workshop participants are from Western Grain & Feed Assn., Farmers Grain Dealers Assn., Iowa State and various trade groups.

Richardson Announces 'Significant' Products

CLIFTON, N.J. — Two developments considered significant in the field of milling technology have been announced by Richardson Scale Co.

The developments—what is described as a "break-through in automatic bagging," and a step toward more complete automation—were announced at company headquarters here and also were introduced to the feed industry at the recent National Feed Show in Chicago.

Described as a "dramatic breakthrough in the technique of high-performance automatic bagging," Richardson's "Speedac" bagging scale attains speeds up to 24 50-lb. bags per minute of free-flowing materials, according to the manufacturer. With sluggish materials such as mashes, meals or powders, the Speedac scale has attained speeds up to 16 50-lb. bags per minute with an accuracy capability of 2 sigma 2 oz., it was claimed.

This high-performance capacity was attained, Richardson engineers explain, with the use of a newly developed sensing device which speeds up beam response leading to a faster cut-off. It is claimed that the device greatly reduces the effects of variations in the falling column of material at the conclusion of the weighing, which makes compensation almost unnecessary. The new Speedac unit components are friction-free, wear-proof and dust-proof.

The new Speedac E-50 has a wide range of capacities.

Company officials said that duplex units provide approximately double the outputs, and triplex models give even higher speeds and/or accuracies.

The second significant development introduced by Richardson Scale was its "Formula Library." It was said that the Formula Library, used in conjunction with a master programmer such as a punched card or punched tape reader, makes possible the operation of a batch-mixing plant without an operator in attendance.

The Formula Library consists of a series of groups of small multi-turn potentiometers, with each group containing the equivalent of one complete feed formulation. As many groups (books) as are needed are combined to make up the mill's library.

The Formula Library performs as any standard weight selector type "Select-O-Weigh" system. Its main advantage, according to a Richardson spokesman, is that it provides a multiplicity of formulas in a compact form. Its operation in a feed mill was described thus: At the beginning of the day, the calibration unit is used to preset the potentiometers of each "book" in the library to the proper settings. The master programmer would then be set to select the books in a pre-determined sequence for the mill's entire production for the day.

A Richardson representative said that up until the development of the Formula Library, none of the present programming systems in use offered a solution to the problem of programming or pre-setting an entire day's production for a single weighing system.

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Florida Weighs Proposal to Drop Feed Standards

CHICAGO—A bill now under consideration by the Florida legislature would change the state's feed law to eliminate standards for various types of formula feed, it was reported at a meeting of the Purchasing Council of the American Feed Manufacturers Assn.

A Florida council representative, Keith Morgan, Jackson Grain Co., Tampa, said that there is optimism among feed manufacturers that the measure will pass.

Standards for formula feeds, which are part of feed laws and regulations in several southern states, specify nutrient levels for various feeds which must be maintained by manufacturers. Mr. Morgan commented that this "paternalistic" approach to feed control no longer is needed because feeders know what their livestock and poultry require.

The proposed law, however, will provide standards for feed ingredients, he said.

The Purchasing Council also reviewed progress of the effort to change the practice of grain trading on a bushel basis to trading on a weight basis. Leadership in this campaign now is in the hands of the National Association of State Departments of Agriculture, H. Varner, Quaker Oats Co., reported.

A recent survey of 18 states by the association indicated that 16 agriculture departments favor the change. The Purchasing Council can be of help in contacting state officials with arguments for the change, Mr. Varner said.

A show of hands on whether the council still favors the change indicated that only three persons at the meeting were opposed.

Problems with salmonella contamination of feed ingredients have not been heard of recently, John Broshard, Alabama Flour Mills, reported. "We hope it is under control," he said. Apparently some by-product plants involved in the problem some months ago "have been cleaned up," Mr. Broshard said.

It was also reported at the meeting that the organization is working with corn millers in developing purchasing guides for corn gluten feed and meal.

Feed Mill Feasibility Workshop Planned

MANHATTAN, KANSAS—A feed plant feasibility workshop for top management of feed and grain firms who are considering building a new feed mill or remodeling present feed processing facilities will be held at Kansas State University May 25-26.

The conference, to be held in the K-State Union, is sponsored by the formula feed extension staff at K-State in cooperation with the Kansas Feed Manufacturers and the Kansas Grain & Feed Dealers Assn.

The program is designed to give assistance in making sound decisions to persons interested in building a new feed mill or remodeling existing facilities.

The two-day session includes talks on "The Formula Feed Industry: Past-Present-Future," "Long Range Planning—A Must," "Planning a New Feed Mill or Remodeling the Old One?," "Getting Technical Assistance," "Financing, Construction and Operating Capital," "Putting Plan into Action."

Principal speakers include John A. Shellenberger, head of the K-State department of flour and feed milling industries; G. M. Spencer, Ernest-Spencer Engineering Co., Topeka; Maurice Johnson, vice president, First National Bank, Kansas City, and Robert W. Schoeff and Richard J. Baker of the K-State formula feeds extension staff.

California Feed Man, William Stoddard, Dies

NAPA, CAL.—William (Bill) Stoddard of Stoddard Associated Milling Co. in Napa, died of a heart attack recently.

Mr. Stoddard, a familiar figure in California feed industry circles, was said to be the first to recognize the value of soaking barley long before the more recent experimental research. The soaked-barley products he sold as turkey feed created an early sensation among California turkey raisers 20 years ago.

Mr. Stoddard was also known for the work he did in controlling cattle grubs with feed.

For many years he was associated with Art Ascherman of San Francisco in the Stoddard-Ascherman Milling Co. Later, he formed the Stoddard Associated Milling Co., from which he retired about two years ago. From that time until his death he had done extensive traveling in South America and the Orient.

Soybean, Meal Price Trends Seem Certain; But Options Questioned

MINNEAPOLIS — Though it appears certain that soybean prices will remain strong until new crop supplies are in sight, L. R. Brewster of General Mills' specialty products division indicates it is more difficult to determine whether the July option will come down to meet September's or whether the September option will move up to meet July's. He says in a recent soybean meal market letter that he believes the change will be a combination of the two choices and that it definitely will continue narrowing of the spread.

In Mr. Brewster's opinion, soybean meal prices will follow soybean prices and, as the July soybean option works lower, meal prices will follow the same pattern. Later, in August and September as processors "begin to scrape the bottom of their bins and meal supplies are not as plentiful as they are now, prices should strengthen provided animal unit numbers are still large," he said. "However, it is very likely by that time animal unit numbers—particularly in the form of broilers—will be much lower than during May, June and even July."

Mr. Brewster estimates there will be little or no carryover of beans this fall, and it is very possible, he says, that certain localities will actually run out of soybeans for processing unless this year's crop is considerably earlier than normal. He estimates April - September consumption of beans at 264.5 million bushels, 200,000 bu. less than April 1 total stocks.

Mr. Brewster looks for exports this year to be less than the record set last year. He estimates that exports will amount to 7 million bushels per month April through September of this year, compared with 10.5 million bushels per month in the same months last year. He believes this will happen because of higher soybean prices.

He notes that the statistical picture on soybeans has not changed appreciably since the first analyses were made in November and December, 1960. "If anything," he comments, "usage has been greater than was estimated at that time. Yet, the price of soybeans runs into resistance when it gets much over the $3 level."

To explain this situation he examined the soybean meal and soybean oil markets and came up with this analysis:

Soybean Meal—"From a low of about $43 for unrestricted 44% meal in mid-November, soybean meal has moved to a high of close to $80—a range of $37. This compares to last year's range of $55-$64 and the previous year's range of $49-$66 for the same period.

"Animal unit numbers have been increasing during recent months and will continue at high levels during the early summer months, at least. Some of these—broilers, particularly—will remain on high protein rations while in some rations substitutions for soybean meal can be made. As a matter of fact, some substituting has been taking place during the past few weeks.

"With the continued large crush and high prices for soybean meal vs. the lower prices for meat products, ingredient buyers have been reluctant to own any more soybean meal than is needed immediately. Because supplies have been plentiful, this policy has not caused any mixers to lose production time as meal has been readily available, provided the buyer would pay the price. During the past several weeks, stocks of soybean meal have reached almost 200,000 tons."

Soybean Oil—"Oil stocks are not burdensome at the present time. There have been rumors of more exports during the summer months, but even without heavy exports it would appear the domestic usage of soybean oil will continue at its currently high rate. For many months oil has carried more than its share of the processing load, while meal definitely has not. This relationship has changed during recent weeks, but with any weakening in demand for meal (and, thus, weaker meal prices) the oil market could again take up the slack.

"Soybean oil prices will likely remain fairly strong for the balance of the crop year because of low workable inventories, continued good demand on both domestic and export use and smaller supplies late in the summer when the crush is smaller."

Indiana Poultrymen Hurt by April Storm

LAFAYETTE, IND.—Hoosier poultrymen have taken it on the chin due to severe climatic conditions during the last few weeks, according to R. L. Hogue, executive secretary of the Indiana State Poultry Assn., Inc.

The most recent of the blows was extremely heavy rain causing flooding, road washouts and allied problems. It is reported that insurance adjusters had claims filed for over 100,000 turkeys in southern Indiana during the week of May 8. In addition to this, northern and central Indiana turkey men had severe losses in certain areas due to crowding and drowning, Mr. Hogue states.

One feed mill at Dubois, Ind., was totally surrounded by water and unable to deliver feed to its 300,000 turkeys and 500,000 layers. Other dealers in the area cooperated by operating around the clock, Mr. Hogue said.

A late freak snowstorm April 15 and 16 caused excessive damage to early poults that had been placed on range recently and in one case over 1,000 breeder hens were reported lost. Poultrymen who had chickens on range suffered heavy losses, Mr. Hogue said. At some places, 25 to 50% of birds on range were killed.

Improving Facilities of California Feed Mill

HAYWARD, CAL. — The Hayward Poultry Producers Assn. has announced that plant improvements at its Ripon location are well under way, and within the next few weeks all ingredients will be coming into the Ripon plant in bulk.

Completion of the project is expected by the middle of August. The firm has also announced that all feed which was formerly manufactured at the Hayward mill is now being produced by the Morgan Hill and Ripon plants. These two mills are said to be strategically located and will be able to serve the Hayward-Niles areas very well.

The Hayward plant and office will remain in service for co-op members to pick up their sacked feed and patronize the supply department.

Condemnations Down; USDA Lists Causes

WASHINGTON — Condemnations of young chicken carcasses by federal inspectors in March declined 44% from the high level of a year earlier, according to poultry figures announced by the U.S. Department of Agriculture.

However, rejections of mature chickens and all turkeys were higher this March than a year earlier.

The USDA report shows that rejections of young chickens amounted to 1.97% of quantities inspected, compared with 3.50% in March, 1960.

The report, which for the first time classified condemnations, showed that respiratory diseases accounted for 74% of the total number of young chickens rejected. This was down from 81% last year.

Leukosis accounted for 5.3% of the condemnations and plant mistakes 7.4%. Tumors caused condemnation of 0.3% and other causes were responsible for 13.3%, according to the report.

USDA's report indicated that airsacculitis was the largest single culprit in causing destruction of young chickens in March of this year as well as all of last year. The report showed that it accounted for loss of 1,213,388 birds, 46% of the total. Septicemia cost 598,078 young chickens and inflammatory processes accounted for 149,825.

States' Rates Told

The report also indicated the state condemnation rates for the first time. The range for March varied from 0.90% in Illinois and Michigan to a peak of 3.49% in Oregon. Regional condemnation rates ranged from 1.77% in the South Atlantic area to 2.56% in the West.

Several states which had high rates of condemnation in 1960 lowered their rates by 50%, the report indicated.

Percentages of other classes of post-mortem condemned poultry were: Mature chickens, 2.35%; fryer-roaster turkeys, 1.06%; young turkeys, 0.94%; old turkeys, 2.19%, and ducks, 1.51%. Total weight of post-mortem condemnations was 9,177,000 lb.

Jack Hubbard to Join St. Louis Sales Firm

MINNEAPOLIS — Jack Hubbard, sales and marketing manager for the Pillsbury Co.'s feed division, has announced his resignation to join Maritz, Inc., a sales incentive and promotion firm in St. Louis.

Mr. Hubbard joined Pillsbury in 1947 as a resale man. He is a graduate of Northern States Teachers College, Marquette, Mich. Prior to joining Pillsbury he was a high school teacher in Ironwood, Mich., and program director and manager of several commercial radio stations.

Mr. Hubbard was named sales manager of Pillsbury's feed division in 1954 and was appointed manager of the division's marketing department when it was established in 1957.

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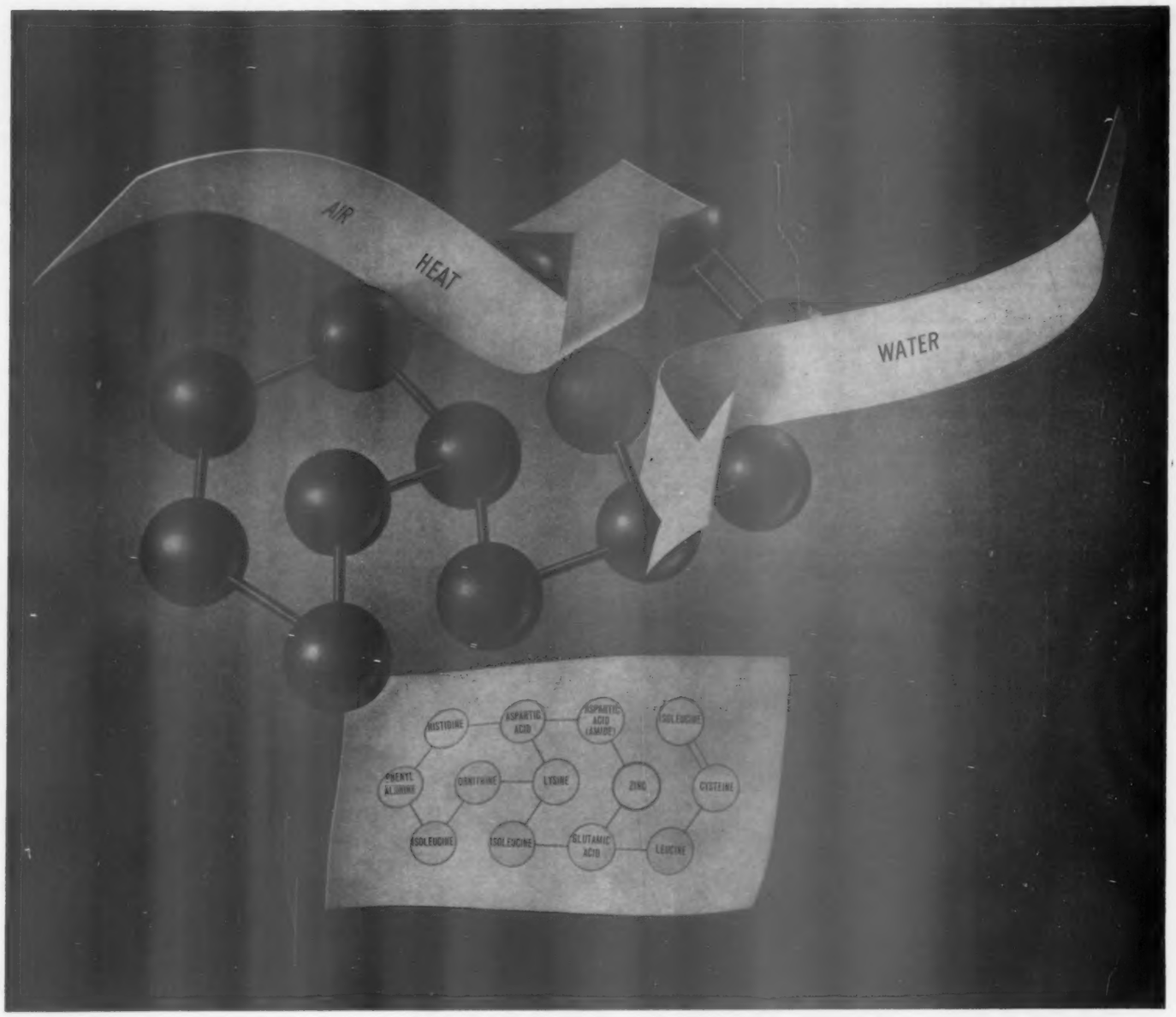

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From CSC research comes the answer to the search for full bacitracin potency. The answer: Baciferm®—a zinc-bacitracin compound, an antibiotic with a totally new and stable molecular structure.

How did CSC research build this new molecule? First, CSC scientists discovered the weak spot in bacitracin's molecular structure. Then, through testing and experimentation, they "hooked" various metallic salts onto this "weak link" to see if they could stabilize it. Many salts were tried — manganese, iron, tin. Then zinc, and it proved to be the answer. Baciferm — a zinc bacitracin — was perfected!

The benefits of this scientific breakthrough. With this unique molecular structure, Baciferm displays unusual stability, retains its full measure of antibiotic activity. In fact, tests have shown that it keeps its full strength for years. Feed processors using Baciferm can therefore forget about any potency loss during the time interval between manufacturing, shipping, mixing, selling, and the actual date of feeding. No antibiotic loss during pelleting with Baciferm.

In short, feed processors can use Baciferm with confidence. It is a sound, stable antibiotic that can be counted on every time.

Would you like more information? Write: Animal Nutrition Department, Commercial Solvents Corporation, 260 Madison Ave., New York 16, N. Y. In Mexico: Comsolmex, S.A., Mexico 7, D.F.

COMMERCIAL SOLVENTS CORPORATION CSC

Environment, Nutrition and Health Topics Outlined During Tennessee Poultry School

KNOXVILLE, TENN.—The second Tennessee Poultry Health School recently conducted here on the campus of the University of Tennessee outlined for a "class" of 55 poultry industry representatives detailed information concerning environment, nutrition and poultry health.

The program was organized and supervised by Dr. R. L. Tugwell, who is in charge of poultry disease work and the poultry service laboratory at the university.

Summaries of some of the discussions heard during the school follow.

TOMORROW'S PRODUCER—Who will produce tomorrow's poultry and eggs? Dr. O. E. Goff, head of the University of Tennessee poultry department, answered that question this way:

"The specialist with superior managerial ability — on a farm large enough to make a desirable return over all costs, with sufficient financial backing to survive a period of low prices and geared to produce in adequate volume for a given market."

Dr. Goff discounted the talk of those who say "eggs of high quality can be produced only in the northern states." He said an examination of random sample egg laying test reports shows that "egg quality is of grade A in all tests" and that "the average grade of all eggs for the year produced in the Tennessee, Florida and Texas tests were grade A."

Dr. Goff had other words of clarification. He said eggs of high quality can be produced by hens whether they are in cages or on the floor. "One hears statements that eggs produced by hens kept in cages are either superior or of poorer quality than are those produced by hens on the floor," Dr. Goff commented. He indicated that such a generalization was not true.

Egg consumption data related by Dr. Goff show: (1) A gradual increase in consumption of poultry products, (2) a shift in preference for poultry products and (3) approximately 75 lb. of poultry products per capita is desired by the American of today.

"Since 1945, egg consumption per capita has decreased," Dr. Goff said. "However, the total consumption of poultry products per capita should be examined. If the number of eggs consumed per capita might be assumed to weigh 2 oz. each, then the pounds of eggs for each of the five-year intervals from 1940 to 1960 would be 39.9, 51.7, 48.6, 46.5 and 40.5 lb., respectively. If the pounds of eggs were then added to the pounds of poultry meats consumed the total consumption of poultry and eggs would be 56.9, 76.8, 73.3, 72.9 and 75.7 lb. for each of the five-year intervals."

POULTRY COMFORT FOR EFFICIENCY—Dr. H. V. Shirley, physiologist in the poultry department, noted that there is more to stress than just the comfort of the animal involved.

"While any one stress factor by itself can lower the efficiency of the body a great deal, what might be of greater importance is that the resistance to some other factors may be lowered," Dr. Shirley said. "For example, stress alters the nutritional requirements. Low-temperature increases the mortality of chicks to pullorum. Chicken blackhead is not a common disease, yet the blackhead organism is commonly found dormant in chickens. It is possible to induce blackhead in a chicken by injecting a stress factor—which may be any of numerous errors in management or the occurrence of another disease (such as coccidiosis)."

Dr. Shirley listed some of the stress factors and characteristics they influence in poultry:

Temperature — respiratory rate, heart rate, body temperature, oxygen consumption, growth rate, feed efficiency, disease, cannibalism, egg production, egg size and shell thickness.

Humidity—Litter conditions, dirty eggs, disease, feather growth and growth rate.

Air flow—Affects temperature, humidity and, therefore, litter condition.

Light production—Cannibalism, eye disease, growth rate and age of sexual maturity.

Floor space—Growth rate, disease, litter conditions, cannibalism and egg production.

Other factors—Feeder and waterer space, vaccination, debeaking, parasites, flies, rats, visitors, handling, diseases, feed quality, malnutrition of parent, stock, improper incubation, birds of different ages together, abrupt changes in management and many other factors.

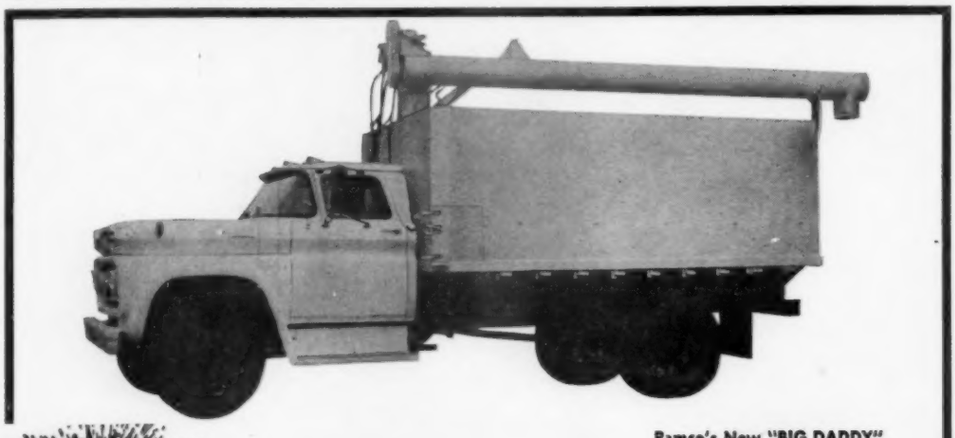
FEEDING THE GROWING PULLET — TO STARVE OR NOT TO STARVE — According to Dr. J. K. Bletner of the poultry department, a review of the published research reports on methods of feeding the growing pullets suggests the following statements and conclusions:

1. When range reared pullets have been compared with confinement reared pullets, the range reared birds usually have had the smaller body weights at sexual maturity, have required more time to reach sexual maturity, have laid more eggs, have laid larger eggs and have had the lowest mortality in the laying pens.

2. Comparisons of growing pullets restricted in feeding time with those allowed unrestricted feeding time indicated that pullets allowed feed for two hours per day consumed only about 15% less feed than full fed birds. When the pullets were allowed feed for about two hours per day for five days a week the savings in feed were 25-30%. This method of feeding has had no marked effect on the performance of the bird in the laying pen since in most of the studies the restriction was not great.

3. Reports comparing the feeding of whole or ground grain and minerals to growing pullets on unlimited range with the feeding of a complete diet have indicated that when only whole grain and minerals are fed body weight is markedly reduced and sexual maturity greatly retarded. When ground grains and minerals have been fed to growing pullets on unlimited range, more feed has been required per pullet but no other effects have been noted. Laying house performance studies with pullets

(Turn to TENNESSEE, page 88)



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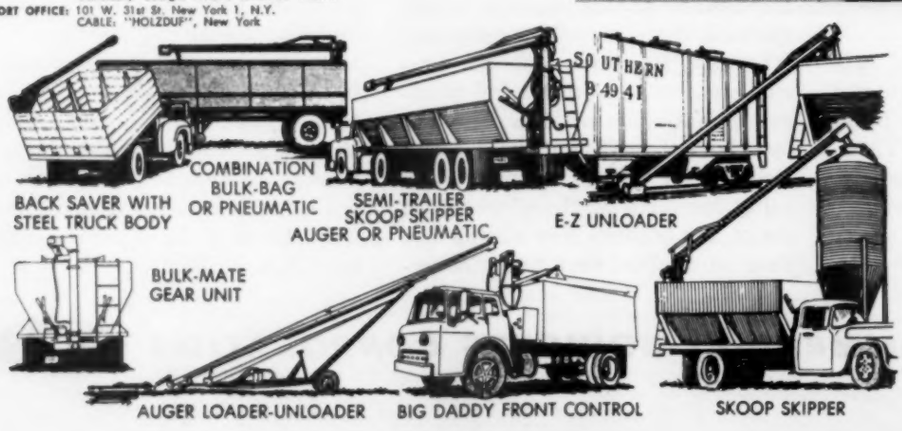

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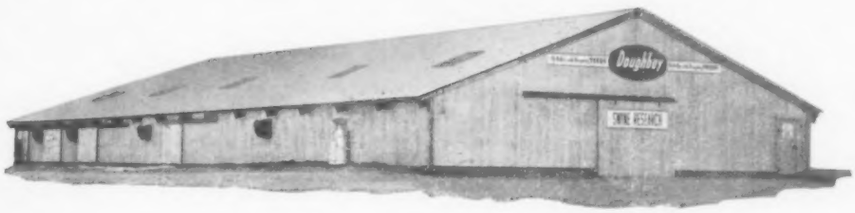

and the multiple farrowing building on the Doughboy Research Farm with 22 months of improved swine raising results

A Sure-Fire Way to Increase Your Swine Feed Sales

Here's How Doughboy Helps Farmers Remodel Existing Farm Buildings and Boosts Swine Feed Tonnage for the Feed Dealer...

Now, through Doughboy swine research, you can increase your swine feed sales by offering hog raisers a really practical and proven program for raising more hogs in confinement . . . by using existing farm buildings or constructing new buildings to set up a **more profitable,** a **more efficient** hog operation.

This program is possible now because of advances in building plans, management and feeding developed after nearly two years of testing in the multiple farrowing building on the Doughboy Research Farm. And these ideas are backed up by successful remodeling operations on Midwest farms where swine raisers are producing more hogs . . . with less labor . . . fewer losses . . . and **improved feed efficiency.**

Since the first of this year, Doughboy has been averaging about a dozen requests a week from farmers on how to remodel their buildings for **more efficient** swine production under the Doughboy feeding-management program.

A Doughboy-designed swine building is being planned nearly every day. Farmers have converted dairy barns . . . steer sheds . . . layer houses . . . even a double corn crib and an old potato warehouse into more practical swine production units. Each one of these remodeled swine buildings or new buildings represents a **swine feed tonnage** varying from 50 to more than 400 tons a year FOR THE FEED DEALER!

Only Doughboy can offer you this complete swine program which really works:

- **PLANNING SERVICE** on remodeling farm buildings for swine. Includes floor plans, ventilation, manure disposal, temperature control, insulation, feeding and watering equipment, etc.
- **PLANNING SERVICE** on new buildings.
- **IMPROVED MANAGEMENT METHODS.** Includes raising hogs in confinement on concrete, breeding, farrowing schedules, disease control, marketing.
- **BETTER FEEDING** with Doughboy "Climatized" feeds—especially formulated and tested on Doughboy's own research farm to do better in our climate area and to resist stresses imposed by our more rugged seasons.

How would you like to join the Doughboy team of dealers and INCREASE YOUR SWINE FEED SALES?

It's easy. Just fill out the coupon with your name and address. You may list the number of farmers in your trade area who would be interested in the Doughboy swine program. Mail this coupon directly to: OPPORTUNITIES IN SWINE, Doughboy Industries, New Richmond, Wis.

A Doughboy representative will contact you to give you the full story of how the Doughboy swine program works . . . how it's really doing the job for hog raisers.

Then you can decide if you want to join the Doughboy team to **increase swine feed tonnage** . . . to become a leader in your farm community by bringing farmers new and better opportunities in hog raising.

Do Better with Doughboy

Climatized Feeding Programs

DAIRY BARN is converted into a farrowing house for 22 sows every two months on the William J. Schalla farm, New Richmond, Wis. Schalla uses more than 300 tons of feed a year in his operation.

LAYER HOUSE is turned into a compact, efficient farrowing unit for six sows on this Wisconsin farm owned by Chris Bethke. This gives Mr. Bethke a start on an expanded hog raising program.

OPPORTUNITIES IN SWINE
Doughboy Industries, Inc.
New Richmond, Wisconsin

I am interested in the Doughboy swine program and would like to know more about how Doughboy helps farmers to remodel buildings for more efficient swine production. Yes, your representative may contact me.

NAME_____

FIRM NAME_____

ADDRESS_____

No. of Farmers Interested_____ DATE_____

NUTRITION COUNCIL—Dr. J. Wesley Nelson, research director, Nutrena Mills, Inc., takes over the gavel as chairman of the Nutrition Council of the American Feed Manufacturers Assn. during the 53rd annual convention in Chicago May 8-10. Dr. Nelson succeeds Dr. W. W. Cravens (to the left of Dr. Nelson), director of feed research and nutrition, McMillen feed division of Central Soya.

Drug Firm Official Comments on Additive Law and Regulations

CHICAGO—Dr. Aaron L. Andrews, president and general manager of Hess & Clark, Ashland, Ohio, last week presented his company's views on how the food additives amendment to the food and drug law and tighter regulatory controls have affected producers of feed medications.

"In our observation, the net result of the tightened-up law and more rigid regulatory controls has been to cause a closer and more careful look at drugs used in feeds," Dr. Andrews said at a press conference in Chicago. "Now people are reading the label and understanding it—sometimes for the first time. And feed manufacturers are examining their choice of feed medications more critically."

The result, Dr. Andrews said, is a "sounder feed medication business because only drugs that can return the feed man and the farmer a significant profit are being selected."

The comments were made at a conference announcing that the Food and Drug Administration had allowed a new claim for the feeding of furazolidone (nf-180) to growing swine to prevent enteritis and scours and to improve feed efficiency. (Feedstuffs, May 13.)

More Time Required

More than 3½ years of laboratory and field research supports the new use for furazolidone, Dr. Andrews said. He said the new food additives amendment has "made it more difficult, more time consuming and more expensive for a drug manufacturer to get FDA clearance for drugs to be used in feeds of livestock and poultry produced for human food.

"But this new part of the law has not made it impossible to clear new drugs and to extend the uses of safe and valuable drugs previously cleared.

"We've known for a long time—long before the food additives amendment—that furazolidone is a safe and useful drug for growing swine. Its value in the treatment of vibrionic dysentery and necrotic enteritis in swine was recognized in 1958 by FDA clearance of claim for this use.

"It has taken another 3½ years to clear the additional claim for preventive use in growing swine. This time was lengthened at least 1½ years by the influence of the food additives amendment."

Dr. Andrews said that although furazolidone is a "not new drug" and is "generally recognized as safe," the company's efforts to clear a complete swine protection program of feeding furazolidone to both the pregnant sow and growing pigs met with only partial acceptance by FDA when it was submitted in October, 1959.

The program of feeding the drug to pregnant sows one week before and two weeks after farrowing to cut down on the transmission of disease-causing organisms to her pigs was accepted by FDA at that time. The second part of the program—feeding furazolidone to growing pigs in pre-starter, starter and grower rations—was delayed by the "food additives people" in FDA pending data showing that the drug or its metabolites were not present in the tissues of animals at the time they are consumed as human food, Dr. Andrews said.

"The additional research to prove more stringently the safety of furazolidone was time-consuming and expensive," he said, "but it has proved very fruitful.

"Radioisotope tracer studies in experimental animals to show the rapid metabolism and depletion of the drug from tissues were conducted at Hess & Clark's new feed additives laboratory in Ashland, at Purdue University and at the Hazelton Nuclear Science Corp., Palo Alto, Cal.

"On the basis of complete data which showed both the efficacy and safety of feeding furazolidone to growing pigs, the FDA allowed the new portion of the claim to become effective late in April, 1961."

TALLOW FIRM FIRE

LOUISVILLE—The City Hide & Tallow Co. here is operating as usual despite a two-alarm fire that destroyed one of its buildings recently. The fire broke out after an explosion, the cause of which is still not known. No one was injured.

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IQ is not new.

Defined by Webster as "intelligence quotient," a high IQ is considered by modern Americans as a mark of distinction.

Like your great aunt and her operation, we're proud of our IQ and want to talk about it. But we have a new definition.

IQ is INTEGRITY and QUALITY in phosphorus —something you've received for a long time from Smith-Douglass.

CDP was the first defluorinated phosphate to be exhaustively tested in nutritional feeding trials. Continuing tests prove that CDP *is as good as or better than* other feed phosphorus supplements.

Nutritionally accepted DIKAL is dicalcium phosphate in an ideal mechanical condition. Recent and continuing tests confirm that DIKAL *is as good as or better than* other dicalcium phosphates on the market.

CDP and DIKAL are produced by carefully controlled Smith-Douglass processes. Both are subjected to meticulous quality control.

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STRAUBE HOUSE—The Oscar Straube scholarship house at Kansas State University was dedicated as one of the activities in connection with the dedication of K-State's new milling technology building. The house is a memorial to the late Oscar Straube, prominent feed industry leader.

Straube Scholarship House Dedicated

MANHATTAN, KANSAS — The Oscar Straube scholarship house at Kansas State University was dedicated May 18 as one of the activities in connection with the dedication of the new milling technology building at the university.

A brief ceremony was held in connection with a special program for high school students. James North, president of Nutrena Mills, Minneapolis, and co-chairman of the industry's fund solicitation committee for Straube house, made the presentation. R. I. Throckmorton, president of the K-State Endowment Assn., accepted on behalf of the university.

The scholarship house is a memorial to the late Oscar Straube, who was president of Pay Way Feed Mills, Kansas City, and was a prominent leader in the feed industry. Funds for the house were provided by the Straube family and members of the feed industry for the purpose of assisting and attracting outstanding students interested in feed milling and related fields.

K-State officials said that Straube house, opened just last September, is building an atmosphere to deepen interest in milling work. It also is expected to become a focal point for feed industry visitors.

Straube house, the former Kappa Sigma fraternity house, provides living accommodations for 45 men. Students selected to live in the house must maintain good scholastic standing and may, if they meet all requirements, continue to live in the house throughout their college careers.

During the fall semester, Straube house men compiled the highest scholastic average among male housing groups at the university.

ADM Reports Earnings Up for Nine Months

MINNEAPOLIS — Archer-Daniels-Midland Co. reported net earnings of $2,914,437 for the nine months ended March 31, 1961. This was equal to $1.83 a share.

In the same July-March period a year ago, the company earned $2,625-095, or $1.65 a share. ADM's fiscal year ends June 30.

The board of directors declared a dividend of 50¢ a share, payable June 1 to shareholders of record May 22. The company has paid cash dividends every year since 1927 and consecutive quarterly dividends for 29 years. There are 1,589,315 shares of stock outstanding.

John H. Daniels, ADM president, said that although third quarter results did not meet expectations, there are signs of improvement in the current fourth quarter.

The company's agricultural group is showing improvement in all lines except flour and alfalfa, and an improvement in alfalfa operations is anticipated in the final quarter, Mr. Daniels said.

In the chemical group, resin sales have begun to reflect the improving seasonal activity, while chemical and foundry sales are expected to increase as heavy industry accelerates production.

ADM's earnings from foreign enterprises showed an increase over last year.

Bergren Joins Agency

KANSAS CITY — Harvey Bergren has resigned as advertising director of Pay Way Feed Mills in Kansas City to become an account executive with Standart & O'Hern, Kansas City advertising agency.

Mr. Bergren was in charge of Pay Way advertising and sales promotion for over two years. At one time prior to that, he was advertising manager of Gainer Mills in Springfield, Ill.

In his new position at Standart & O'Hern, he will specialize in agricultural advertising.

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HOW TO PRODUCE MORE AND MEATIER BIRDS AT MORE PROFIT

Do this: coordinate proper feeding and protective medication to insure improved health all the way through . . . from poult to market bird.

Hit-or-miss methods won't make a successful turkey operation. Producers need to go all-out — to *organize* every resource to insure profits.

This means extra good management — including efficient housing, up-to-date sanitation practices and proper feeding—*to keep disease out of flocks.* Disease, visible or invisible, is the turkey producer's toughest problem. It can strike at any time with disastrous results.

That is why this Coordinated Feed-Health Program was developed. This sound, practical, easy-to-follow program combines the use of formula feeds containing AUREOMYCIN® and the vaccines and medications that keep diseases *out*, lower cost of production and raise profits.

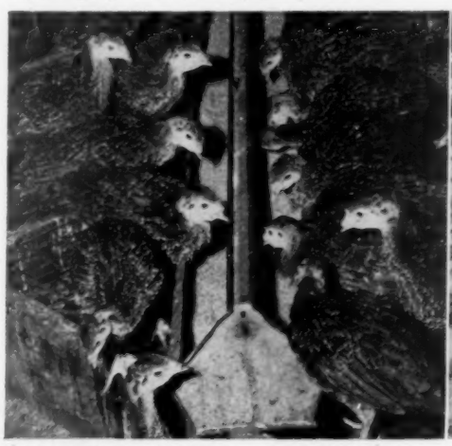
Read each step in the program. Learn *what* to do to eliminate disease, *when* to do it and *how* to do it.

Talk to your feed man. Ask him for your free folder which describes, in detail, the Cyanamid Coordinated Feed-Health Program for turkeys. If he doesn't have a copy, write direct to: American Cyanamid Company, Agricultural Division, New York 20, N. Y. *®AUREOMYCIN is American Cyanamid Company's trademark for chlortetracycline.*

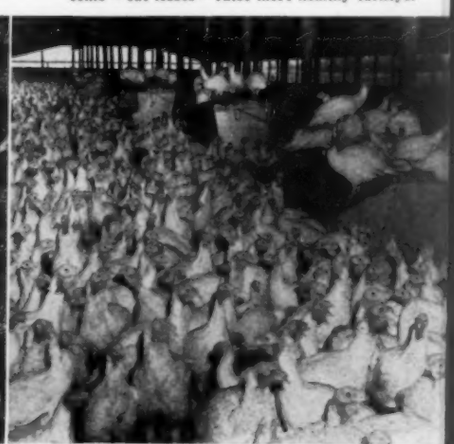
The label instructions on Cyanamid products, and on products containing Cyanamid ingredients, are the result of years of research and have been accepted by Federal and/or State Governments. Always read the labels and carefully follow their directions for use.

1. Give Aureomycin Soluble in drinking water. Start poults on AUREOMYCIN Soluble in the drinking water for first 5 to 7 days. This assures adequate early intake of AUREOMYCIN to help get poults on feed early — prevent starve-outs — guard against disease and stress — get poults off to a fast, healthy start.

2. Provide starter feed with Aureomycin. First 4 weeks in poults' lives are critical. To stop heavy losses — insure livability and fast, early growth — give a feed that contains 200 grams of AUREOMYCIN per ton. You fight sinusitis, synovitis, hexamitiasis and blue comb — cut losses — raise more healthy turkeys.



4. Stop losses from blackhead. At the first sign of blackhead, follow this procedure: (1) use a feed containing the treatment level of CYZINE® for 14 days or (2) use ENHEPTIN® in the drinking water for 7 days. Both are extremely active against blackhead. Both provide maximum safety.



5. Market more quality turkeys. Use AUREOMYCIN Soluble or treatment feeds containing 200 grams of AUREOMYCIN per ton to reduce losses from bacterial infections at vaccination and other times of stress. AUREOMYCIN keeps birds on feed — making fast, efficient gains. You market more, better looking turkeys.

Now . . . feed manufacturers can obtain FDA acceptance for feeds containing CYZINE, and supply turkey producers with this important feed-health step for the control of blackhead.

CYANAMID SERVES THE MAN WHO MAKES A BI

NOW YOU CAN OFFER TWO-WAY CONTROL OF BLACKHEAD WITH CYZINE!

F.D.A. applications may now be submitted for feeds containing CYZINE. This preferred drug for the control of blackhead adds a powerful punch to your turkey Feed-Health Program.

Turkey growers need a *thoroughly dependable* drug in the feeds they buy in order to cut blackhead losses. Now, you can provide exactly that kind of drug with Cyanamid's CYZINE® Premix 10%.

CYZINE is low in toxicity, provides maximum safety. It is not only the best defense for the *prevention* of blackhead — it is also the most effective drug for treating outbreaks. CYZINE is palatable — feeds containing it are readily consumed by young or older birds.

The continuous feeding of 0.015% CYZINE (3 lb. of CYZINE Premix 10% per ton of feed) is the recommended *preventive* level.

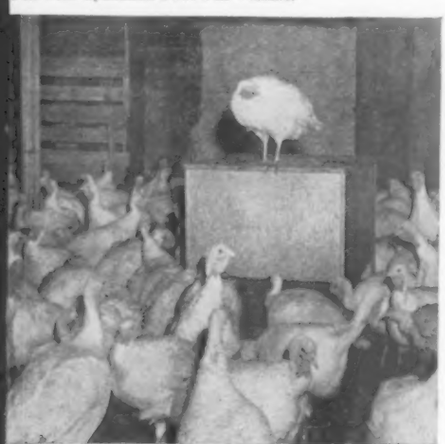
The recommended level for treating outbreaks is 0.05% CYZINE (10 lb. of CYZINE Premix 10% per ton of feed). Treatment should be continued for two weeks, followed by continuous feeding at the preventive level.

Recommend a complete Feed-Health Program

CYZINE in your feeds represents just one of the ways you can serve producers with a Coordinated Feed-Health Program for turkeys. The entire step-by-step program is described in detail in the turkey producer advertisement reproduced here.

This program is the soundest, most practical way to raise more turkeys at less cost. It can be a continuous business builder for feed manufacturers and dealers who participate in it. American Cyanamid Company, Agricultural Division, New York 20, N. Y. ®*CYZINE is American Cyanamid Company's trademark for 2-acetylamino-5-nitrothiazole.*

3. Vaccinate against these costly diseases. At 4 weeks of age, vaccinate against Newcastle disease with Cyanamid Wing-Web Vaccine. At 8 to 10 weeks, vaccinate against erysipelas with DUOVAX® Erysipelas Bacterin. At 10 to 12 weeks, vaccinate against Fowl Pox with Cyanamid Fowl Pox Vaccine.



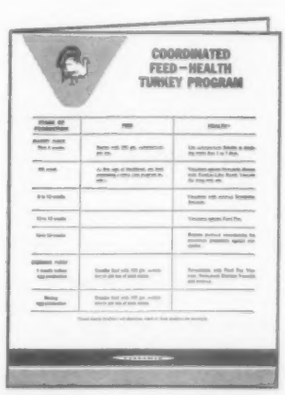
5. More poults per turkey hen. Turkey hens should get a feed containing 100 grams of AUREOMYCIN per ton of total ration one month before and throughout the egg production season. Hens stay healthy, vigorous. Result: more eggs, greater hatchability, more poults, more profit.

CYANAMID

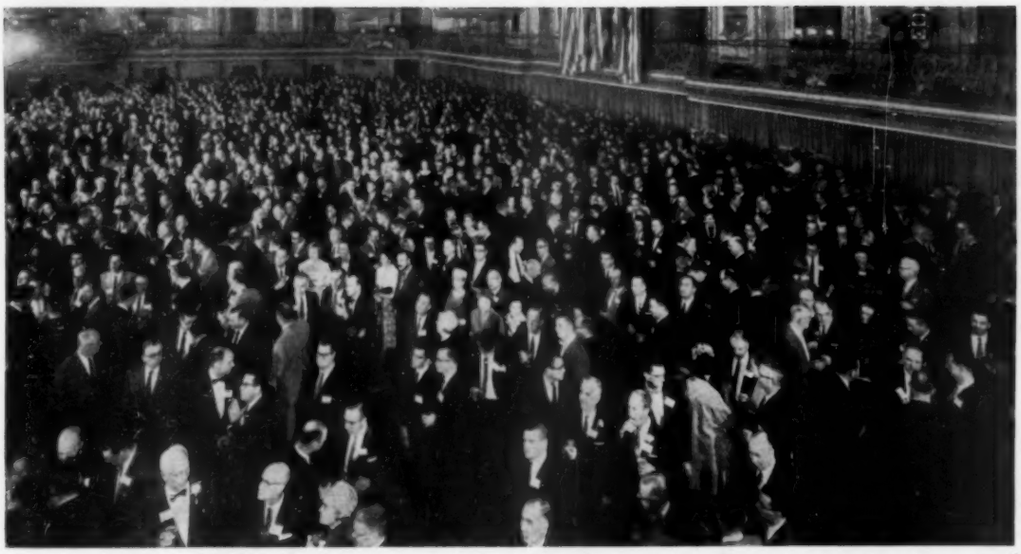
COORDINATED FEED-HEALTH PROGRAM

...NESS OF AGRICULTURE

This month, your prospective customers are reading the advertisement shown here. It appears in leading turkey papers reaching 95% of all turkey growers. These customers will also be listening to well-known Farm Directors tell the benefits of the Coordinated Feed-Health Turkey Program on 40 radio stations throughout the country.



This folder describes the step-by-step Coordinated Feed-Health Program for turkeys. It is for distribution to your customers. If you need extra copies, see your Cyanamid representative or write directly to Cyanamid.



EVERYBODY WAS THERE—"The Best of Broadway," a social reception for 3,500, provided one of the highlights of the 53rd annual convention of the American Feed Manufacturers Assn. in Chicago, May 8-10. Shown above is the ballroom scene, where a mixed chorus of ten and orchestra moved to each of the four corners of the balcony to provide top tunes from top Broadway shows, complete from marquees to melodies. Best known songs from "My Fair Lady," "The Sound of Music," "Salute to Romberg," and "The Music Man" gave 90 minutes of variety to a fact-packed convention.

Fruen Milling Co. Appointment Told

MINNEAPOLIS — The formula feed division of Fruen Milling Co. here has named Eldon Juhl of Jefferson, Iowa, to its sales staff.

Eldon Juhl

The appointment is another step in the expansion of Fruen's formula feed division, according to Lowell Smith, division manager. Mr. Juhl will make his headquarters in Jefferson and will serve as district supervisor covering areas in northern and western Iowa.

Mr. Juhl holds a B.S. degree from Iowa State University, Ames, Iowa, and an M.S. degree from South Dakato State College at Brookings, S.D. He was a sales representative working in formula feeds before joining Fruen Milling.

Borden Feed Unit Holds Sales Meeting

ELGIN, ILL. — Representatives of the feed supplements division of the Borden Special Products Co. gathered in Elgin for a three-day sales meeting recently.

Richard G. Sanders, sales and marketing director for the division, said the purpose of the meeting was to familiarize the representatives with the full scope of the division's operations, as well as with a new product and promotional program.

The representatives also toured the company's feed supplements plant at Hampshire, Ill., and its product development laboratory, quality control laboratory, nutrition research laboratory and test farm, all in Elgin.

CHAMPION

MOBILE MILL EQUIPMENT

PROVEN PROFITS AND PERFORMANCE

This newly designed One-Diesel-Engine unit reduces power costs to fifteen cents or less per ton—INCLUDING FUEL USED ON THE ROAD.

Your opportunity for real profits in 1961 is CHAMPION—the most economical of all mobiles.

OPTIONAL EQUIPMENT AVAILABLE

SHELLER with high discharge for loading cobs directly into truck or trailer.

AIR UNLOADING plus standard auger.

TEN-FOOT EXTENSION for discharge auger.

ROLLER MILL.

BULK CONCENTRATE CARRIER with six 600-lb. compartments.

VOLUME MEASURING UNIT measures by bushel, all grain being ground.

Get the full story on this new Champion Unit TODAY

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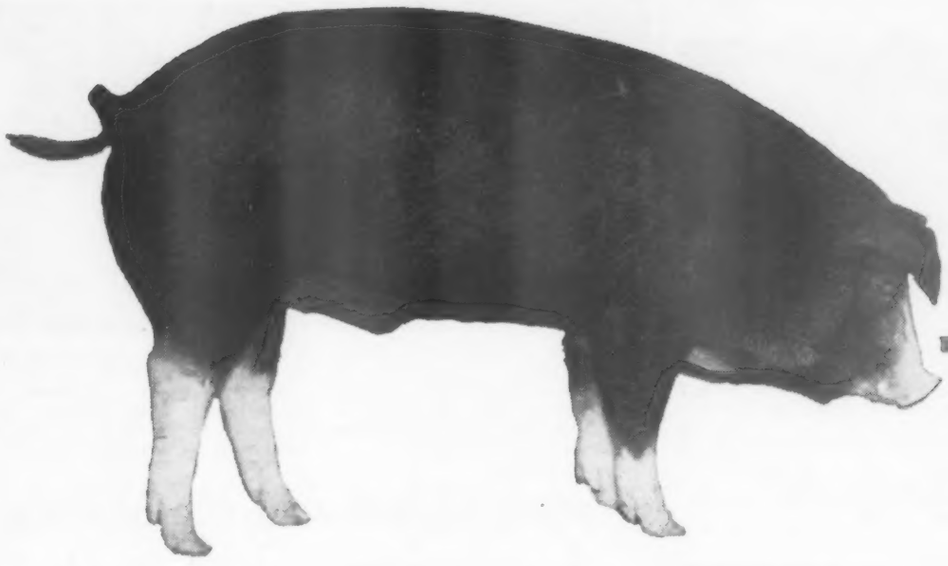
has pex-appeal!

and it gets more food from less feed

CONSOLIDATED QUARRIES DIVISION

THE GEORGIA MARBLE COMPANY • LITHONIA, GA.



+++

Put more pork in your feeds with Dawe's Vitamelk

There's more pork in a ton and more profit for the feeder, when you fortify your gestation, lactation, starter, grower and finisher rations and supplements with Vitamelk Swine. It is a specialized fortifier that simplifies and makes more effective your job of fortifying to meet today's performance demands for growth rate and feed conversion.

Vitamelk Swine, developed by Dawe's Nutrition Research and Technical Service, provides full fortification in a single package. It is a Dawe's quality-controlled premix of essential micronutrients at research-proved levels for high-efficiency swine feed performance.

Your Vitamelk-fortified swine feeds have nutritional advantages that cost and profit-conscious feeders look for . . . advantages that result in faster growth rate, better feed conversion and lower feed cost to produce a pound of pork.

Talk pork production with your Dawe's man, or write for more information on Vitamelk and new concepts in swine nutrition.

Dawe's

VITAMELK PRODUCTS

There are specific Vitamelks for:

- broilers
- layers
- breeders
- turkeys
- dairy
- beef
- swine

Dawe's

DAWE'S LABORATORIES, INC.
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World's Oldest and Largest Specialists in Feed Fortification

MORE PROFIT FOR YOU
Big Savings for Poultrymen

SHELLMAKER

LOWEST COST CALCIUM SUPPLEMENT FOR LAYING HENS—DOES A GOOD GRIT JOB, TOO.

Shellmaker is produced from high calcium limestone formed millions of years ago from shell and other calcareous deposits under the sea that one time covered the entire land area now known as the Mississippi River basin.

Shellmaker is slowly soluble in the gizzard to supply most effectively all the extra calcium the hen needs for building strong egg shells. It is also hard enough to do a good grit job as shown in feeding trials at several state experiment stations.

Write for information and prices today.

CALCIUM CARBONATE COMPANY
520 SOUTH FIFTH STREET, QUINCY, ILLINOIS

MIDWEST BAG TRUCKS AT YOUR SERVICE . . .

. . . Supply those who demand the BEST in QUALITY

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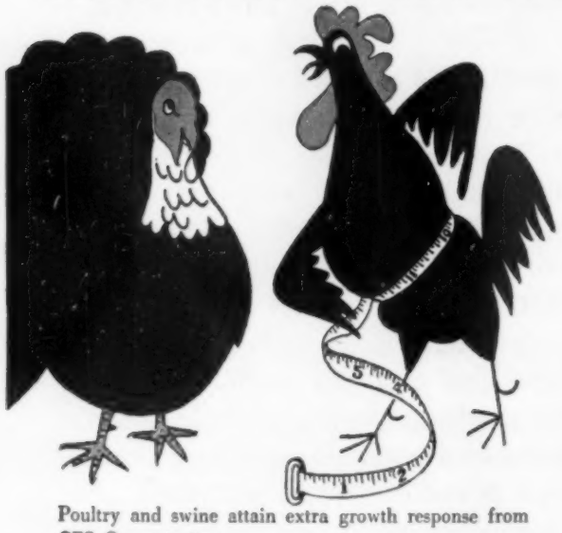
Faster GAINS for Fatter PROFITS



Poultry and swine attain extra growth response from CFS Concentrates.

CFS CONCENTRATES

The profit-producing benefits of CFS Concentrates have been proved through university tests using controlled rations with broilers, turkeys and swine. With this single, *economical* concentrate, you can partially replace or eliminate more expensive sources of UGF (unidentified growth factors). This means more profit for *you* in the manufacture of high-efficiency rations. Put CFS Concentrate into your production plans *now*.

CLINTON CORN PROCESSING COMPANY
CLINTON CLINTON, IOWA

CHECKING BIRDS—Dr. Harms checks his birds. Eight hundred were used in the 1960 experiment. After a growing period, they were placed in cages in the laying house and studied during twelve 28-day periods.

WEIGHING EGGS—Eggs laid during the day are weighed and the weight recorded on a chart to determine any effects from methionine hydroxy analogue. Dr. Harms found egg weight apparently not affected.

Protein Levels and Methionine Supplementation of Feeds For Laying Hens

By Dr. Robert H. Harms
University of Florida

With the cost of today's high potency feed formulations directly affecting the economics of poultry and egg production to so great an extent, careful consideration must be given to ways of meeting nutritional needs at greater savings.

To this end, studies have been conducted using reduced amounts of protein in laying hen feeds, and results are promising. Tests carried on over a three-year period at the University of Florida Agricultural Experiment Station indicate that a 13% protein diet apparently is adequate for laying birds when a methionine supplement is added to the feed.

Though our studies are not complete, the per cent production and feed efficiency achieved compare favorably with those of birds on a 17% protein diet, generally considered the level required to support a maximum rate of lay.

Further, we have found that the growing feed given pullets will have no effect on the birds' protein requirement in the laying feed. In addition, the choline content of practical feed, according to our latest experiments, apparently has no effect on the protein requirement.

If our tests prove out, feed manufacturing costs could be reduced, with significant savings for poultrymen. To lower the protein level 1%, the formulation replaces 2½ lb. of soybean meal per ton with an equivalent amount of corn. Considering today's price differential between corn and soybean meal, this can result in substantial savings for the formulator.

Reduced Protein Level

Because the switch to corn meant reduced protein levels in the diet, our study also needed to determine whether added methionine was necessary to compensate. In this test, the methionine supplementation was provided by methionine hydroxy analogue.*

A study completed last winter indicates that such changes are practical. Ten different laying diets were used, eight containing 13% protein and two containing 17%. We discovered that birds getting 976 calories in a 13% protein diet had a feed efficiency of 3.99 and 67.3% production rate.

At the same time, layers on identical diets minus the methionine hydroxy analogue recorded a feed efficiency of 4.16, while output slipped to 66.6%. We already know that the ability of poultry to metabolize energy and protein efficiency is related to the methionine content in high-energy feeds. Choline was also included as a variable because of its relationship to methionine and energy. The results indicated, however, that this supplementary choline wasn't necessary.

With layers receiving 17% protein, choline and methionine hydroxy analogue, we saw no marked improvement in their feed efficiency or production over those pullets on 13% protein. Similar findings were made in instances where the energy content was increased to 1063 calories.

We decided on a feed supplement of 0.075% methionine hydroxy analogue principally to insure adequate methionine supplementation. When we began this past year's experiments, we did not know what to expect because our 1959 study failed to demonstrate any difference between protein levels in the range 14.7-16.7%.

The findings that year were sur-

*MHA, manufactured by Monsanto Chemical Co.

TABLE 1. Performance of Various Laying Diets During One 12-Month Experiment

Per cent protein	Energy	Supplement	Per cent production	Feed per doz. eggs
13	976	——	66.6	4.16
13	976	Choline	68.6	4.09
13	976	Meth. hydr. anal.*	67.3	3.99
13	976	Choline-meth. hydr. anal.	67.1	3.97
17	976	Choline-meth. hydr. anal.	68.1	3.96
13	1063	——	63.9	4.07
13	1063	Choline	62.7	4.18
13	1063	Meth. hydr. anal.	64.3	4.14
13	1063	Choline-meth. hydr. anal.	66.4	3.96
17	1063	Choline-meth. hydr. anal.	67.6	3.75

*MHA—Supplementation of 0.075% methionine hydroxy analogue, calcium.
Choline—200 mg. added per pound of feed.
Energy—Calories of productive energy per pound of feed.
Feed Efficiency—Pound of feed consumed per dozen eggs produced.

AUTHOR — The author, Dr. Robert H. Harms, poultry unit, Florida Agricultural Experiment Station, University of Florida, Gainesville, Fla., computes results of his experiments with methionine hydroxy analogue in the diet of laying hens.

prising because our 1958 research had indicated that the addition of methionine hydroxy analogue to the laying hen feed was indeed a factor in a significant increase in egg production at both the 14.7 and 16.7% protein levels (Feedstuffs, Nov. 15, 1958).

The 1959 findings could have been affected by a number of things. For example, the 14.7% protein level used the second year could very well have been nutritionally equivalent to the 17% level. Or, nutritional deficiencies other than protein could have prevented full utilization of the protein, limiting the effectiveness of the methionine hydroxy analogue.

Study Continues

We have not drawn any final conclusions from our three years of studies. We have already embarked on a fourth experiment and probably will continue with others in succeeding years.

In fact, we have added a second amino acid, lysine, to the diet of this year's experimental hens. We also have added another strain of birds, Hy-Line 934C, principally to check the theory that different strains may differ in their protein requirement.

Furthermore, we have widened the range of protein level and now have birds on 11, 13, 17 and 21%. We also are giving them varying levels of methionine hydroxy analogue and lysine, depending on the protein level.

So, as we conduct this fourth year of studies we feel there is sound basis for the premise that methionine is the first limiting amino acid for laying birds, as we found it to be for broilers in previous tests.

Arizona, California Cattle on Feed Up 2%

WASHINGTON—A total of 848,000 head of cattle and calves were on feed for market in Arizona and California as of May 1, according to the Crop Reporting Board, U.S. Department of Agriculture.

This is 2% larger than the number on feed April 1, and is 15% larger than the number a year earlier.

In Arizona cattle and calves on feed for market on May 1 totaled 219,000 head, 13% fewer than on April 1, but 11% more than the 197,000 head on feed a year earlier.

Cattle and calves placed on feed during April totaled 31,000 head, compared with 34,000 in April of last year. Marketings of fed cattle during the month at 63,000 head were 43% above the April, 1960 number.

On May 1, cattle and calves on feed for market in California totaled 629,000 head, 8% more than on April 1, and 16% more than a year earlier.

Cattle and calves placed on feed during April totaled 176,000 head, compared with 136,000 head in April last year. Marketings of fed cattle during the month at 129,000 head were 34% larger than in April, 1960, reports the Crop Reporting Board.

Cornell Expert Sees '61 as Profitable Year For Egg Producers

ITHACA, N.Y. — Even though recent egg-price outlook reports have been pessimistic for poultrymen, a Cornell University professor feels that 1961 will still be a profitable year for egg producers.

Prof. Jonathan Tobey of the New York State College of Agriculture explains that many of the outlook reports have only compared this year's statistics to those of last year, concluding that the number of laying hens, baby chicks, and eggs in storage is higher than that of a year ago. The result is a prediction for a dismal future.

"It's true that the poultry industry is now in a period when egg prices fall seasonally. After eight months of good prices, a seasonal decline will tend to produce gloomy outlook predictions. But, this year's statistics must be compared with those of years before 1960 to show the full story," he emphasized.

Prof. Tobey cites the figures that convinced him that 1961 will continue to be a profitable year for poultrymen:

1. Even though 40 million more egg-type chicks have been hatched to date this year than last year, the total of 172 million chicks is still much less than the average of 213 million for the years 1955-60.

2. While the number of laying flocks in March was down only 3% from March, 1960, it was also the lowest on record for that month.

3. The number of hens and pullets of laying age on farms as of April 1, 1961, was placed at 292 million compared to 298 million in 1960 and 320 million for the same period in 1950-59.

4. The volume of shell eggs in storage as of March 31 was about 27% of the 1960 holdings and only 15% of the 1956-60 average. And the volume of frozen eggs was down 30% from a year ago and about 27% under the 1956-60 average.

John Baringer, Ohio Ag Chief, Retires

REYNOLDSBURG, OHIO—John W. Baringer, chief of the division of plant industry of the Ohio Department of Agriculture, retired recently after serving the state of Ohio for nearly 30 years.

John W. Baringer

Mr. Baringer, who received his B.A. degree from Wabash College in 1918 and a M.S. degree from Ohio State University in 1924, was instrumental in developing two important programs in Ohio. One was development of the modern laboratories that house the division of plant industry at Reynoldsburg. Another was the vitamin assay program said to have "saved Ohio farmers millions of dollars in their purchases of livestock feedstuffs."

Mr. Baringer's early work began with the U.S. Department of Agriculture, division of plant industry, where he served as a field agent, assistant plant pathologist and plant pathologist between 1918 and 1929. In 1930, he joined the division of plant industry for the Ohio Department of Agriculture as a parasitologist where he was a specialist in charge of the section of plant pest control. He was division chief from 1930 to 1961 with the exception of 1946 when he served as director of research for the Association of Nurserymen in Washington, D.C.

His work as chief of the division of plant industry in Ohio included the direction of many programs such as inspection and analysis of livestock remedies, feedstuffs and others.

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PRODULAC
A grain fermentation product

This economy fortifier is rich in proteins, vegetable fats, and highly nutritious. It also contains essential Vitamin B-G Complex factors, as well as unidentified growth factors. Mixing Produlac in your formula feeds will promote quicker growth, greater meat and egg yield and will produce feeds your customers want to buy. It's a good way to gain and hold customer acceptance. Sold only to manufacturers of formula feeds.

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I can help you improve sales and profits

For a modest yearly retainer, I work with your sales personnel with continued, regular visits to your headquarters developing, training and supervising sales and marketing programs.

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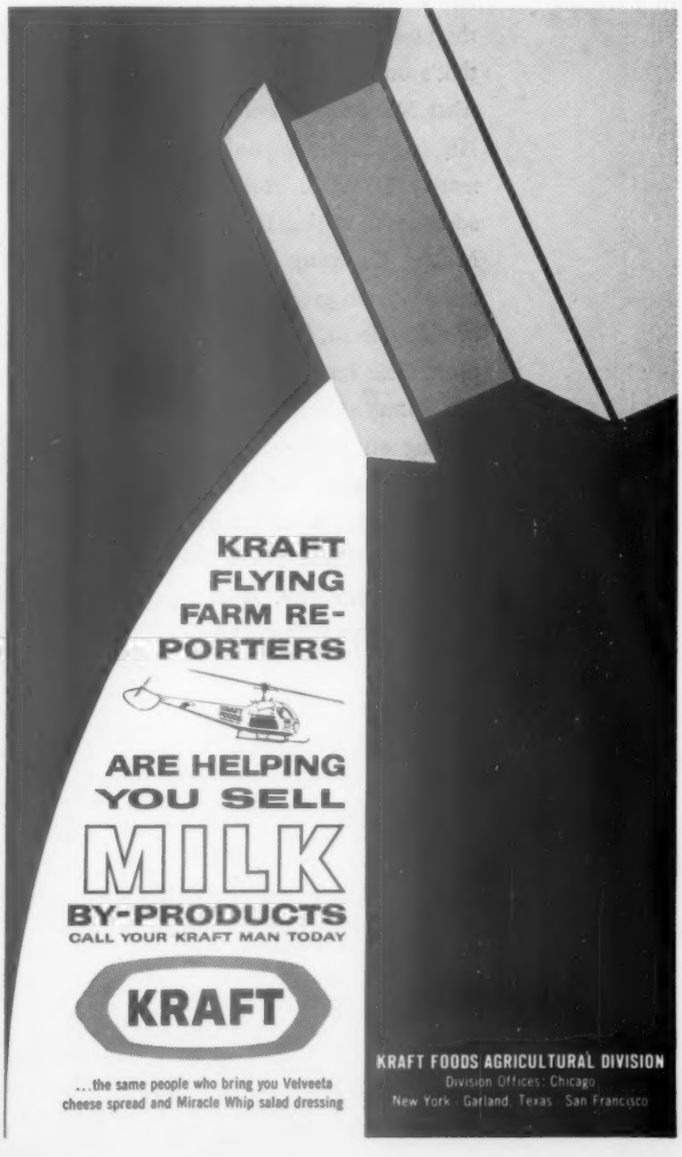
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"After years of superior performance in the field,

Unistat® remains the coccidiostat of choice for us,"

says C. T. Ramzy, President, R & R Milling Company, Inc., Carthage, Mississippi

Nobody knows better what a feed additive is worth than the man who runs the business. After all, it's his money that's on the line. So, it's important what Mr. Ramzy says about Unistat. His company now produces approximately 3,000,000 broilers a year. In addition to raising the birds, R & R Milling Company has a highly integrated operation consisting of hatchery, breeding flocks, feed mill, and dressing plant. This kind of an operation gives Mr. Ramzy a close-up look at all factors bearing on profit—**feed conversion, condemnation, flesh quality,** and **growth rate.** Unistat has proven superior on all these points for R & R Milling Company. It can perform equally for your feeds, too!

C. T. Ramzy, President, R & R Milling Company, Inc.
Carthage, Mississippi

UNISTAT®

gives your feeds new profit benefits, also prevents coccidiosis best

Growers everywhere are looking for broiler feeds that do two things: (1) protect against coccidiosis, and (2) stimulate fast, efficient gains. Both of these are reasons why your feed should contain Dr. Salsbury's Unistat. Unistat *prevents coccidiosis best*, under practical field conditions. Unistat is more effective as a coccidiostat because of its unique combination of drugs. It also owes part of its unequalled popularity to these other profit-making benefits—benefits no single drug can provide.

- **FASTER GROWTH.** Extensive tests involving thousands of broiler birds show Unistat chicks were *9.7% heavier* at end of 10 weeks.
- **NEED LESS FEED.** Laboratory tests show that Unistat-fed broilers needed *7.3% less feed* per pound of gain.
- **BETTER COLORING.** Shanks of both male and female broilers on Unistat showed *significantly better coloring.*

UNISTAT IS WIDELY ADVERTISED

Because of sustained advertising and promotion, your customers know of Unistat's many advantages. Make sure your feeds provide the many benefits only Unistat can offer. Write, wire, or phone for Feed Manufacturer's Guide. Or, ask for a Dr. Salsbury's representative to call personally and talk with you about Unistat, the feed additive that boosts broiler profits by improving flock health, reducing throw-out losses, stimulating fast, efficient gains.

Dr. SALSBURY'S LABORATORIES
Charles City Iowa, U.S.A.

MORE THAN PRODUCTS—A SYMBOL OF SERVICE

'Time Conversion' Concept Used in Eastern States Feed

By ALLEN WORLEY
Special Correspondent

WEST SPRINGFIELD, MASS. — Eastern States Farmers Exchange has introduced a concept of "time conversion" in poultry and turkey meat production. The concept is centered around a new series of feed formulations called Eastern States FAX-formulated feeds.

FAX stands for "Feed Additive Xtras" which reportedly increase feed intake and promote faster weight gain. Eastern States researchers say this new formulation significantly reduces the time needed to produce marketable birds; hence "time conversion."

A spokesman for the cooperative reported that the poultry and turkey feeds have increased palatability and digestibility. Birds are known to eat more and assimilate easily what is consumed.

FAX is the outgrowth of a correlation of several research projects completed within recent months, a spokesman said. It was found that the proper combining of results of the studies could produce significant benefits in feed formulas.

The Eastern States spokesman reported that FAX-formulated feeds returned up to $27.10 more per 1,000 birds sold on a 17¢ market. A 19¢ market gave $33.56 more per 1,000 birds and $20.64 was gained in a 15¢ market.

The spokesman said the following comprised the FAX principle's application: Calcium and phosphorus mineral balances, high quality protein from fish meal, "fish factor" activity from fish solubles, dried extracted streptomycies fermenation residue, amprolium and Santoquin antioxidant.

The spokesman said the formulation was designed to contain new sources of unidentified growth factors from the fermentation factors and the high quality fish meal and fish solubles. This was identified as dried extracted streptomycies fermentation residue.

It was brought out that the readjustment of the calcium and phosphorus balance in broiler and turkey feeds aims more directly at the natural mineral needs of growing birds. Bone structure and soft skin tissue were favorably affected by this readjustment.

The research indicated that with turkeys especially, leg weaknesses and hock disorders were virtually eliminated.

The birds gain an assist during metabolism from the preservative effect of Santoquin, researchers said. This antioxident retards oxidative destruction of carotenes, xanthophyll and vitamins A and E. Its benefits for storage are evident.

Santoquin also increases the retention of nutrients and aids in the prevention of several degenerative diseases stemming from the lack of the previously mentioned nutrients.

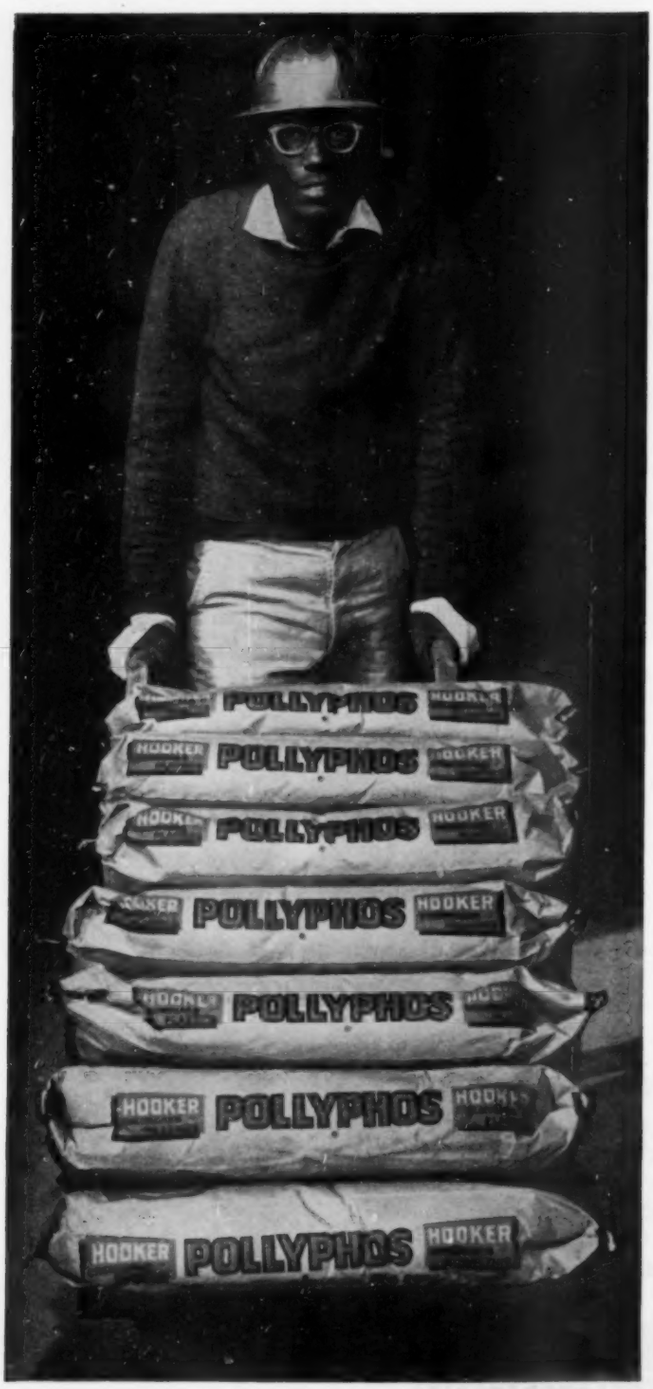
To illustrate the effectiveness of the new FAX-formulated feeds, the Eastern States spokesman pointed to a recent test made with Eastern States turkey starter as used with White Hollands at four weeks of age. Using the old formula feed, females averaged 1.025 lb. and recorded 2.42 feed conversion while under the FAX formulation they weighed an average of 1.120 lb. and showed a 2.23 feed conversion. The male White Hollands, under the old formula, weighed 1.19 lb. with 2.05 feed conversion. FAX resulted in an average weight of 1.26 lb. with 2.19 feed conversion.

The test resulted in a greatly improved flock uniformity and a marked reduction of digestive disturbances during the early weeks of growth, the spokesman summarized FAX-formulated feed advantages by stating that there are ten distinct benefits to the poultry and turkey meat grower.

He said research has shown FAX capable of giving 11.7% more growth to allow earlier marketing. Flock uniformity, size and condition were improved along with the elimination of leg weaknesses and hock disorders. Bone development and strength along with fleshing were improved as were ration palatability, rate of consumption, digestibility and assimilation. Certain degenerative diseases were eliminated and loose droppings and "pasting up" were reduced.

However, the biggest factor, it was stated, would be the "time conversion" factor. More dollars are expected to be returned to the grower at a faster rate.

KENT FEEDS VISITOR — K. W. Spreckley, Scottish director of the British Oil & Cake Mills, Ltd., the largest feed manufacturer in the United Kingdom, is shown on the left, visiting with G. A. Kent, president and founder of Kent Feeds, Inc., at Muscatine, Iowa, headquarters of Kent Feeds. Mr. Spreckley was on a tour of the country, investigating feed distribution methods in the U.S. While in Muscatine he conferred with Mr. Kent, president; J. H. Kent, executive vice president; O. W. Joiner, general manager; Glen Bloom, director of advertising; Dr. C. J. Lewis, director of research and nutrition and other Kent officials.



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Central Retail Feed Assn. to Meet in Milwaukee June 5-6

MILWAUKEE — Economic trends and more effective management of feed businesses will be emphasized by speakers at the June 5-6 convention of the Central Retail Feed Assn. here.

To be held in the Hotel Schroeder, the two-day event will begin Monday morning with reports from the association's officers, and H. B. Hegge, Whitehall, Wis., president, will give the annual address. Speaking at this session will be B. C. Swanson, owner, Swanson Elevator Co., New Sharon, Iowa, president of the Western Grain & Feed Assn., whose topic will be "Operating at a Profit."

Afternoon speakers and their topics will include Oakley M. Ray, director of market research, American Feed Manufacturers Assn., "The Future for Feed Men"; J. R. Curtis, D.V.M., Portage, Wis., "Working Together," and Congressman Henry C. Schaderberg, representing the first district of Wisconsin, "Doing Something About Your Future."

Ray F. Andersen, chairman, Galesville, Wis., will report to the afternoon session on the nominating committee and election of directors. An evening banquet and floor show will climax the first day's activities in the hotel's Crystal ballroom.

Following a salesmen's "eye opener" breakfast Tuesday morning, convention delegates will hear from three featured speakers, and a report from the resolutions committee will be given. The presentation of past director certificates also will be made.

Speakers and their topics will be Robert W. Davis, manager, Small Business Administration, Madison, Wis., "Operating Capital for Feed Men"; Bernard A. Klinzing, Klinzing Bookkeeping Service, Madison, "Figures Tell Tales," and "Success for Sale" will be the topic of John K. Minnock, sales consultant from Chicago.

A Gemuetlichkeit luncheon for all registrants and wives will be held at noon in the Crystal ballroom.

PORT SYSTEM INSTALLED

SEATTLE, WASH. — The Port of Seattle poured 250 tons of dried peas aboard the freighter Mormacland recently by a new pneumatic system expected to encourage the movement of bulk cargo through the port. The port has invested $50,000 in a portable bulk loader called a Grainvayor and 25 steel storage containers designed by port engineers. The new system is designed to meet demand for equipment to handle small lots of such bulk commodities as peas, beans, grains, feed, mustard seed and hay pellets.

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Blackstrap Molasses Figures Disclosed

WASHINGTON — Official data are not yet available to indicate the amount of blackstrap molasses produced during the Florida sugar grinding season; however, unofficial reports indicate that the production may be around 8 million gallons.

That is the word from the U.S. Department of Agriculture. USDA said that final official report of sugar cane ground in Florida for the season ended April 13 shows 1,618,339 tons of cane ground. Raw sugar amounted to 159,135 tons, according to the report.

USDA said that Puerto Rican blackstrap producers have sold about 600,000 gallons of 1961-crop blackstrap, minimum 86 degrees Brix, to local Puerto Rican distributors. Gross price was 12.5¢ gal. at Puerto Rican ports.

Production of corn molasses during March amounted to 2.2 million gallons, compared to 1.8 million gallons produced in March a year ago. Cumulative production of corn molasses during the first three months of this calendar year amounted to 6.2 million gallons as against 5.3 million in the corresponding period last year.

San Francisco Mill Closed by Owners

SAN FRANCISCO — San Francisco's oldest feed mill, The Outsen Milling Co., closed May 3. The Outsen brothers, James B. (Ben), 74, and Arthur, 76, had been running the mill for almost 43 years following in the footsteps of their father who founded the mill in 1885.

The reason for closing the mill was not poor business, for the brothers say "it was better than ever" but they indicated that since they were tired and had no one to leave the business to, they decided to close it.

The mill was operated by Hans Outsen, a Danish immigrant, until he retired in 1924 with his sons taking over. In the early 1900's, the Outsens said, their biggest business was selling barley to the horse-car operators. They said they also sold considerable grain to sailing ships which took it to the Hawaiian Islands for re-sale. Recently, they commented that much of the firm's business has been in the rolled barley area.

Poultry Group Elects

GAINESVILLE, FLA.—A. G. Mazourek of Brooksville, Fla., was elected chairman of the board of directors of the Florida Poultry Industry at a meeting of the directors in Gainesville.

George Painter of Jacksonville was made vice chairman and Bart Ahlstrom of Tampa was selected secretary-treasurer.

The directors considered affiliating with the Southeastern Poultry & Egg Assn. and a committee was appointed to study the matter.

The next meeting day was selected as June 19 at St. Petersburg and will be held in conjunction with the summer meeting of the Florida State Poultry Producers Assn.

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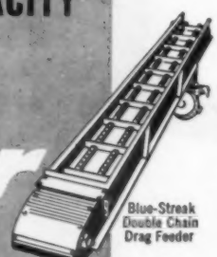

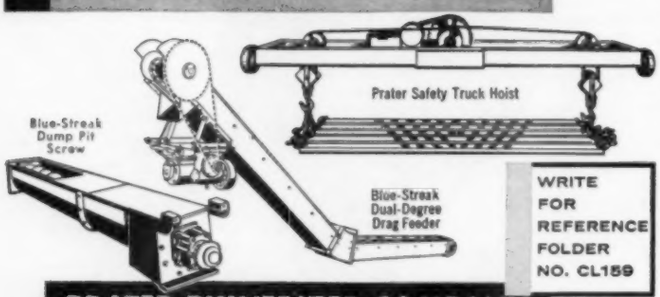

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Grain Sorghum . . . In Swine Feeding

"Future research should give swine producers a supplement to feed with sorghum grain that will give performance equal to that of corn."

By T. D. Tanksley, Jr.
Texas A&M College

EDITOR'S NOTE: The accompanying article was presented by T. D. Tanksley, Jr., extension animal husbandman, Texas A&M College, College Station, Texas, at the second Grain Sorghum Research and Utilization Conference at Amarillo, Texas.

Sorghum grain, like corn, is an excellent feed for hogs when supplemented correctly and used properly.

Selling sorghum grain through hogs offers tremendous possibilities for increasing farm income in the sorghum producing areas. Work by Fred Hale at Texas A&M for the past 30 years consistently shows that with an average hog price of $17 cwt. and protein supplement at $5.50 cwt., an efficient hog producer can sell grain sorghum through hogs for $2.50 or more cwt.

We'll admit there hasn't been much romance or glamour associated with commercial hog production in the past, but the pig's social status is greatly increased by his ability to turn sorghum grain into more dollars.

Texas, with approximately one-half of the total sorghum grain production, normally produces only one-third of the pork consumed by its people. Approximately three million hogs were imported in Texas in 1960 to meet consumer needs. The "Plains" area of Texas produces enough sorghum grain to grow 6-7 million hogs annually, if only half the production was marketed through hogs. The abundant feed supply and market potential make commercial hog production economically attractive and sound in sorghum-producing areas.

Under the leadership of Dr. J. C. Hillier of Oklahoma State University, we attempted to pull together and interpret the data from feeding trials conducted since 1920 at all experiment stations where sorghum grain had been fed to hogs. Most of the trials were conducted in the sorghum-producing areas of Texas, Oklahoma, Kansas, Nebraska and Colorado and more recently in Illinois.

Conclusions From the Study

(1) Sorghum grains are well liked by swine. Generally, they eat as much or more sorghum than corn per day. Some old varieties, such as Darso, Shrock and Sagrain, were somewhat unpalatable due to their high content of tannin, but today's varieties are very palatable for hogs.

(2) Sorghum-fed pigs gained as rapidly or slightly more rapidly than pigs fed corn.

(3) The feeding value of sorghum grain for growing-finishing hogs, as measured by total pounds of feed required to produce 100 lb. of gain, was 90-96% (range 83.5 to 102.4%) the value of corn. (Table 1.) There was a wide variation in efficiency at the different stations. Quality of grain and protein supplements undoubtedly caused some of the variation, in addition to station management and herd health. (Note: These results were obtained with protein supplements, in most cases, that did not have the quality of protein we know is necessary today. In more recent tests, higher quality protein supplements have increased the efficiency of sorghum to 96-100% to that of corn.)

Comments: In 24 trials at three stations involving 554 pigs, comparing whole milo and supplement to yellow corn and supplement, fed free-choice, sorghum was only 91.3% as efficient as corn on the basis of the number of pounds of feed required to produce 100 lb. of gain.

(4) Coarse grinding is preferred to fine grinding. (Table 2.) In Nebraska tests finely ground sorghum grain proved less palatable and the pigs made smaller gains than on coarsely ground sorghum. (Just crack the grain to permit digestive juices to get to the endosperm.)

(5) For growing-finishing hogs, from 50 lb. to market, with good feedlot conditions (feed, water and protection close together), grinding sorghum grain saved only 1.4 lb. of grain for each 100 lb. fed when fed free-choice in self-feeders.

Station results varied greatly. In some Oklahoma tests, grinding saved 12 lb. of feed per 100 lb. of feed used, whereas in South Dakota tests, grinding reduced efficiency.

Cost of grinding and number of hogs fed are important in determining the most economical method of preparation for the individual producer. From a practical standpoint, grain sorghum should be ground:

(a) When hogs are hand-fed limit-

TABLE 1. Ground Milo and Supplement Compared to Ground Corn and Supplement For Growing-Finishing Hogs

Average (7 stations)*	No. pigs	Average initial weight (lb.)	Average final weight (lb.)	ADG (lb.)	Feed/100 lb. gain	——Ground milo to ground corn—— Percentage value of gr. milo to gr. corn ADG	Feed eff.
Ground milo & supplement	305	64.4	197.7	1.64	393.9	100.9	94.7
Ground corn & supplement	158	63.4	198.4	1.63	373.9		

*16 trials. All figures are averages except number of pigs, which is a total for the seven stations—Arkansas, Colorado, Illinois, Mississippi, Nebraska, Oklahoma, Texas.

TABLE 2. Ground Milo Compared to Whole Milo for Growing-Finishing Hogs

Average (5 stations)*	No. pigs	Average initial weight (lb.)	Average final weight (lb.)	ADG (lb.)	Feed/100 lb. gain	——Ground milo to whole milo—— Percentage value of gr. milo to whole milo ADG	Feed eff.
Ground milo & supplement	289	63.2	212.5	1.59	394.3	101.3	101.4
Whole milo & supplement	296	63.4	213.4	1.57	399.3		

*33 trials. All figures are averages except number of pigs, which is a total for the five stations—Kansas, Nebraska, Oklahoma, South Dakota, Texas.

TABLE 3. Free-Choice Compared to Complete Mixed Ration

	No. pigs	Average initial weight (lb.)	Average final weight (lb.)	ADG (lb.)	Feed/100 lb. gain	Gr. milo & supplement fed free-choice to complete mixed ration % value of gr. milo & supplement to complete mixed ADG	Feed eff.
Ground milo and supplement (SF-FC) ..	213	56.2	198.4	1.44	378.4	95.4	93.5
Complete mixed (SF) (gr. milo & supp.) ..	157	55.4	197.8	1.51	355.3		

Oklahoma (eight trials).

ed amounts of grain.

(b) If grain is damaged (weathered, overheated, etc.).

(c) If grain is especially trashy.

(d) If the grain is small, hard or low in moisture content.

(e) If a complete mixed ration is to be used.

(f) If feed, water and shade (or winter protection) are widely separated, thereby preventing pigs from eating and drinking as often as they desire.

(g) If maximum gains are desired.

(6) Very little, if any, nutritive value is obtained by the growing-finishing pig from sorghum grain that is passed through whole. The small percentage increase in protein, fiber, nitrogen-free extract and ash is a result of less water in the sorghum grain after having gone through the pig.

(7) Carcasses from pigs fed sorghum grain are equal to those from corn-fed pigs in yield, finish, firmness and grade.

(8) In limited trials (three at Kansas involving 76 pigs) when steam-rolled milo and protein supplement were compared to whole milo and the same supplement, steam-rolled milo gave slightly smaller average daily gains (1.36 to 1.43 lb.) and was only 95.4% as efficient as whole milo in feed efficiency.

(9) In four trials, involving only 72 pigs (at two stations, Oklahoma and Illinois) pelleted milo and supplement were compared to ground milo and the same supplement. Complete mixed rations were fed. Pelleting increased average daily gains (1.59 to 1.63 lb.) but failed to increase feed efficiency.

(10) Complete mixed rations have given approximately 4% faster daily gains and 6% better feed efficiency as compared to ground milo and supplement fed free-choice. (Table 3.)

(11) No significant difference has been noted in the efficiency of the different varieties of sorghum grain, but definite differences in palatability have been found.

(12) When computing rations, use 9% protein for sorghum grain (or the same as corn).

This is indicated for the following reasons:

(a) Sixty-seven sorghum grain samples collected and analyzed by the Texas Feed Control Service in 1959 ranged in protein content from 7.26 to 12.16%. Although most sorghum grain will average about 11% protein while corn has only about 8.6%, the same amount of high-quality protein supplement must be fed with sorghum grain as with corn to get equal results for growing-finishing hogs. Lysine is the first limiting amino acid in sorghum grain rations for hogs. The available amount of lysine is essentially the same in 100 lb. of corn and grain sorghum.

(b) In feeding trials where sorghum grain and supplement have been compared to corn and the same supplement, both fed free-choice, pigs consumed approximately the same amount of protein supplement when eating sorghum grain as they did when eating corn.

General Comments

(a) Protein levels in swine rations are meaningful only if they are related to a given quality of protein. Amino acid supplementation is coming more into the picture and soon may have practical application. High-quality protein supplements must be used for maximum efficiency.

(b) Confinement feeding is increasing rapidly. Nutritionally balanced, adequate rations are essential for success. This has also markedly increased the use of complete diets.

(c) Few trials have been conducted where high-quality, well-balanced protein supplements (by 1961 standards) were used. Where they have been used, efficiency of sorghum grain as compared to corn has improved. (In the Texas A&M boar and litter testing programs where a high protein supplement has been used with sorghum grain (pelleted), results have been encouraging. Groups of pigs have consistently made 100 lb. of gain for each 290-320 lb. of feed used.)

FEED DEALER SCHOOL—The feed dealers pictured here were recent participants in a Hubbard Milling Co. two-day training school at the firm's research farm near Mankato, Minn. The group represents dealers from Minnesota, Iowa, Illinois and Nebraska.

Front row, left to right: John Hager, Medford, Minn.; Joe Stoderl, Owatonna, Minn.; Lester Kosowski, Schuyler, Neb.; Roy Kromm, Forreston, Ill.; Al Timm, Kasson, Minn.; Carl Johnson, Appleton, Minn.; Eldon Warriner, Granada, Minn. Second row, left to right: Howard Warriner, Granada, Minn.; Richard Peterson, Hutchinson, Minn.; Earl Haukoos, Walters, Minn.; Arthur Ehrat, Lowder, Ill.; Aage Mickelson, Alden, Minn.; Roy Floan, Detroit Lakes, Minn.; Don Lenox, Winnebago, Ill. Third row, left to right: Lee Bass, Hope, Minn.; Delmar Rosenthal, New Douglas, Ill.; Willard Baumann, Watertown, Minn.; Clarence Reinhardt, Postville, Iowa; Harold Sampson, Round Lake, Minn.; Homer Fooler, Eagle Bend, Minn.; Levern Larson, Kasson, Minn.; Donald Gere, Bertha, Minn.; Bob Jacobson, Morn, Minn.; Jim Peters, Schuyler, Neb. Back row, left to right: Henry Moss, Springfield, Ill.; Earl Lindsey, Industry, Ill.; Fritz Lage, Marietta, Minn.; Dale Upchurch, Byron, Ill.; Robert Meeker, Winnebago, Ill.; Leonard Ehmke, Sargeant, Minn., and Lyle Koch, New Ulm, Minn.

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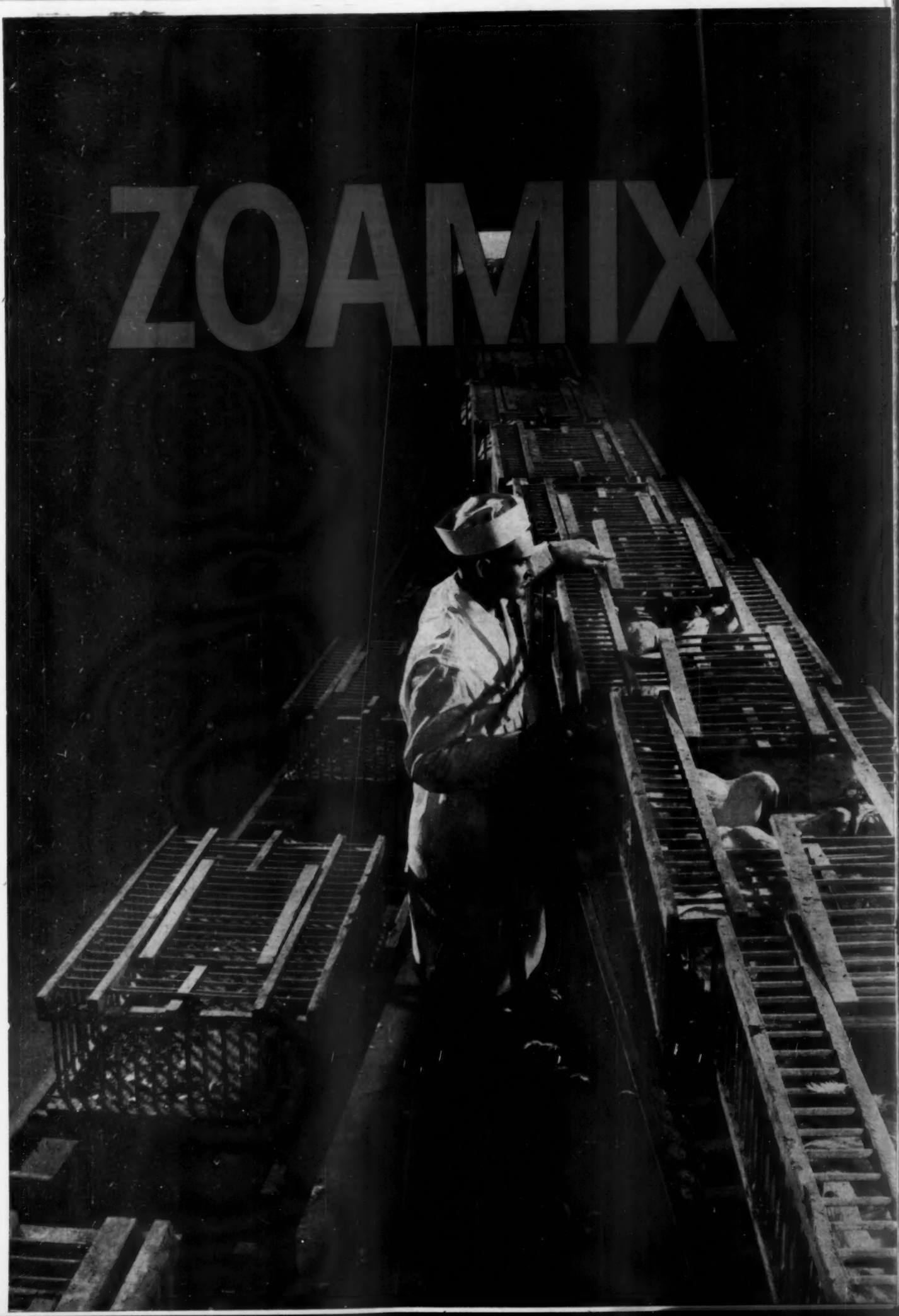
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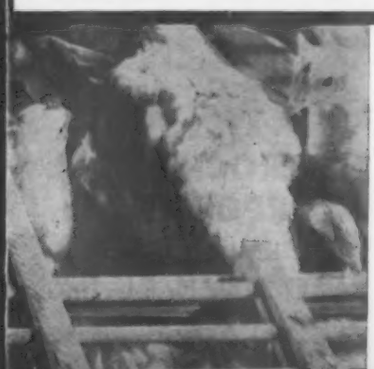
1-Minute test for Zoamix. Simple test enables serviceman to make on-the-farm or in-the-plant check for presence of our coccidiostat in feed. For further information, contact your Dow sales representative.

Polyethylene Boots. Disposable, polyethylene pull-on boots available to feed company servicemen. Helps prevent spreading disease and protects shoes. 25 pairs to a roll. See your Dow representative for details.



THE DOW CHEMICAL COMPANY DOW Midland, Michigan

JOE BROOKS

BY AL P. NELSON

It Pays to Talk It Over

When Joe Brooks got back from a field trip that afternoon, Pop Henley waved at him from the mixing department. Then the veteran came ambling toward Joe.

"We have a little trouble," he said, "with Mike Hansen."

Joe looked surprised. "Mike Hansen! Why he's been easy to get along with. What's the trouble?"

"Well, some of his hogs got sick and he went to a vet, Bill Jamison, over at Cedarville. The vet wrote out a prescription for medicated feeds, and Mike brought it here to be filled."

"I see."

Pop frowned. "Heck, Joe, that prescription had a coupla new drugs in it. I told Mike Hansen that under the new Food and Drug Administration regulations we couldn't mix it without a certification on the product and he got mad. He wanted to know if we thought we knew more about drugs than his veterinarian who went to college more years than we did."

"You acted right, Pop," said Joe. "We've got to follow the law on these deals. The government makes us responsible for every bit of feed we send through our mixes. We've got to protect ourselves. Nobody else will."

"I told him all that," Pop pointed out patiently, "and that made him madder than ever before. He said there was no freedom in this country any more. He said that if a farmer wanted to produce profitably today he should make use of modern nutritional knowledge. And now, he said, there was too much red tape to go through before he could use those drugs, which any good veterinarian or feed dealer oughta know how to handle in the right amounts."

"What did you reply to that?" asked Joe seriously.

Pop grinned. "Well, I told him to contact President Kennedy if he wanted the rules changed. We couldn't change them. Well, he said he might take a trip to Washington and talk to the President. Then he walked over and slipped a coin in the salted peanut container. 'Do I hafta get a certificate to buy these salted peanuts?' he asked real sarcastically. 'There just might be some trace of a new drug in the salt.' "

Keep a Cool Head

Joe nodded thoughtfully. "I can understand the irritation of farmers on these new drug rulings, Pop, but you did absolutely right. Feed dealers must keep cool heads on this question, for they stand to suffer most. They are responsible for what feeds they mix and the ingredients that go into the feed. Farmers and others can rant and rave, but not us."

The door to the office opened and Rusty Hagen came out. "Oh, you back, Joe?" he said. "Mr. Jamison, the veterinarian at Cedarville, phoned about 10 minutes ago. He sounded upset about a medicated feed prescription he issued to Mike Hansen."

"You see," pointed out Pop.

"I know," Joe said slowly. "Lots of other feed men are in the same spot as we are. This drug business is going to settle out after while. In the meantime we have to take it easy, follow the law as best we can and try to protect ourselves and our customers."

"But," protested Pop, "in the meantime customers don't like it because we won't mix their special stuff containing new drugs."

Joe sighed. "That's right, but most of our customers play along with us. They know the situation."

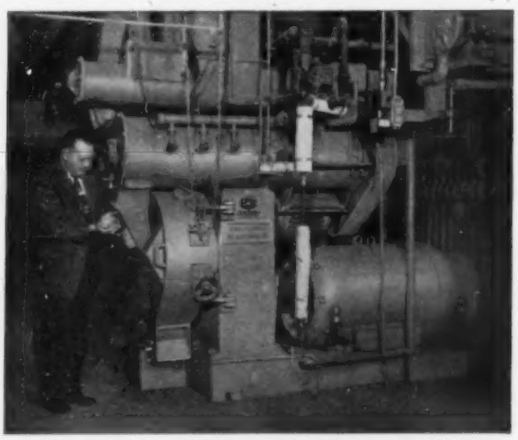
"Yeah, but if we lose 10 to 20 customers this way it'll hurt," complained Pop. "I heard the other day it costs $35 in advertising and promotion to get a new customer. That cost, plus losing their business, we can't stand this indefinitely."

Discuss Problems

The brown haired feed dealer rubbed his chin. "Pop, this situation is coming to a head for us. We are going to do what we can. I am going to phone the four veterinarians in the area we do business in, and the two county agents in our trade area and ask them if they'll meet with us for a discussion on the new drug story. Then out of such a meeting, perhaps we can get some uniform sort of story which we can tell farmers—one that will protect everyone as much as possible and comply with the law. A common emergency draws people together. County agents and vets are perplexed by these new regulations just as much as we are. This is a problem that can perhaps get us to cooperate on making the regulations understandable to farmers."

"Well, I sure wish you luck," Pop said. "Where will you meet?"

"Here, if they agree," Joe said. "And I'll have Mary make some special sugared doughnuts to serve with



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†Data available on request

A REPORT ON SILAGE PRESERVATION

John Schlenker

TAKE IT FROM A MAN WHO KNOWS

. . . Here's the easy, economical, effective way to preserve silage. Do it with Omalass or Scotch O Lass. Make your silage sweet and tasty.

Dairyman Schlenker is one of the thousands of satisfied Omalass and Scotch O Lass customers that know the benefits of using Omalass or Scotch O Lass in their silage.

Schlenker needs the finest to maintain his topflight herd. His average herd consists of 48 registered Holstein cows. Herd Improvement Registry records show butterfat content of 486 lbs. and 13,263 lbs. of milk.

You, too, can have satisfied customers like John Schlenker—when you, too, recommend and sell Omalass and Scotch O Lass like Harry Maurer.

Look at the advantages of the high quality dried molasses products for preserving silage.

- Dry, clean, easy to handle and use.
- Because it's dry, it helps absorb excess moisture.
- In addition to the palatable flavor of molasses, you are also adding nutritional values when using Omalass or Scotch O Lass.
- These nutritional values are retained IN THE SILAGE. While performing the vital role of preserving the silage, keeping it sweet and tasty, you still have 75% of the original nutritional values retained in the silage.
- It's economical, too. Takes only 25 lbs. to preserve a ton of grass silage. Fifty pounds for legumes.

John Schlenker, Wapakoneta, Ohio, began using Omalass for preserving his silage, at the recommendation of his feed dealer, Harry Maurer, manager of the Wapakoneta Farmers Grain Company.

Harry Maurer

YOU SHOULD SELL OMALASS AND SCOTCH O LASS FOR SILAGE PRESERVATION

In addition to the fine mixing qualities and the convenience of these two products for top dressing a feed, you can sell extra tonnage if you recommend it for silage.

Stock and sell...PROFITABLE...OMALASS AND SCOTCH O LASS

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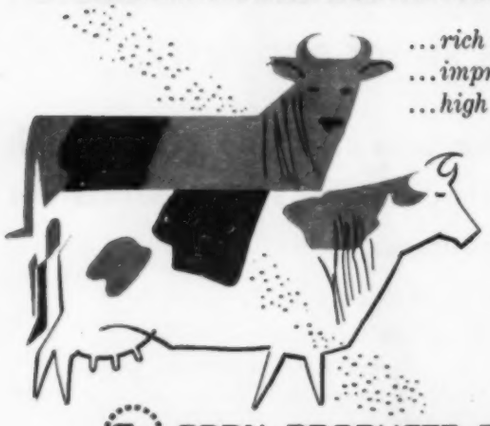

...rich in dextrose
...improves palatability
...high in T.D.N.

CORN PRODUCTS DIVISION
CORN PRODUCTS SALES COMPANY
9 East 55 Street, New York 22, N. Y.

JAPANESE FEED MANUFACTURERS — Representatives of 12 Japanese feed manufacturers recently visited the Midwest Feed Manufacturers Assn. headquarters in Kansas City. The group is shown above with Lloyd S. Larson, executive vice president of the association, leading a discussion touching on production problems, feed tonnage statistics and the program of the association. The privately financed Japanese group plans to spend six weeks in the U.S. learning more about commercial feed production, new equipment, marketing of feed and recent research.

From left to right above, are: K. Shoji, vice director, Central Research Institute; K. Kuno, chief, Naniwa Poultry Agricultural Cooperative; H. Nakahashi, managing director, Nichiwa Sangyo Co., Ltd.; J. Sugiura, president, Kanee-Sugiji Co.; K. Ishikuro, chief, technical division, Marubeni Feed & Livestock Co.; M. Miyasaki, president, Sannoi Shakai Co.; Loren Burns, Mel Miller & Co.; B. Doi, interpreter, International Cooperation Administration; Louis Bosso (standing), Midwest Feed Manufacturers Assn.; M. Yangi, interpreter, International Cooperation Administration; Larry Alley, president, Midwest Feed Manufacturers Assn.; N. Hamanaka, executive director, Japan Formula Feed Manufacturing Co.; Louis Aicher, technical leader, Manhattan, Kansas; Lloyd Larson; T. Kimoto, managing director, Ryowa Feed Co., Ltd.; T. Hirano, president, Chubu Feed Co.; H. Hasebe, inspector, Hokuren Federation of Agricultural Cooperative Assn.; Y. Seki, chief, feed section, Showa Sangyo Co., and T. Okura, chief, business division, Japan Maize Products Co.

coffee. At such a meeting we can at least find out how many viewpoints exist locally on the new drug regulations. Even if each of us learns only a little, the meeting will be worth while. And perhaps we can agree on issuing some information to farmers which explains the new drug regulations—not in Washington lingo but in plain farmer language."

"Well, now," agreed Pop with a grin, "that might turn out to be something. One thing I like about you, Joe, is that you are always ready to talk things over when a problem like this comes up."

Joe smiled. "Men often misunderstand one another, Pop, and if they can talk things over, they often learn the other fellow wasn't thinking what the rest thought he was thinking. Straight talk often means some darn satisfactory and profitable arrangements. Guess I'll phone those vets and agents right now to try to set up a meeting date."

Mail Rat, Mouse Control Literature

MADISON, WIS.—More than 20,000 portfolios of literature dealing with warfarin and with rat and mouse control were distributed in a special mailing in April by the Wisconsin Alumni Research Foundation. The portfolios were sent to county agricultural agents and their staffs, as well as to vocational agricultural instructors, state educational supervisors, and state and municipal health officers.

Each portfolio included 10 illustrated booklets, folders and specially selected reprints which provide essential details concerning rodent problems and the background and use of warfarin baits. The literature was mailed in a special tabbed folder designed to be inserted and maintained in office files as permanent reference material.

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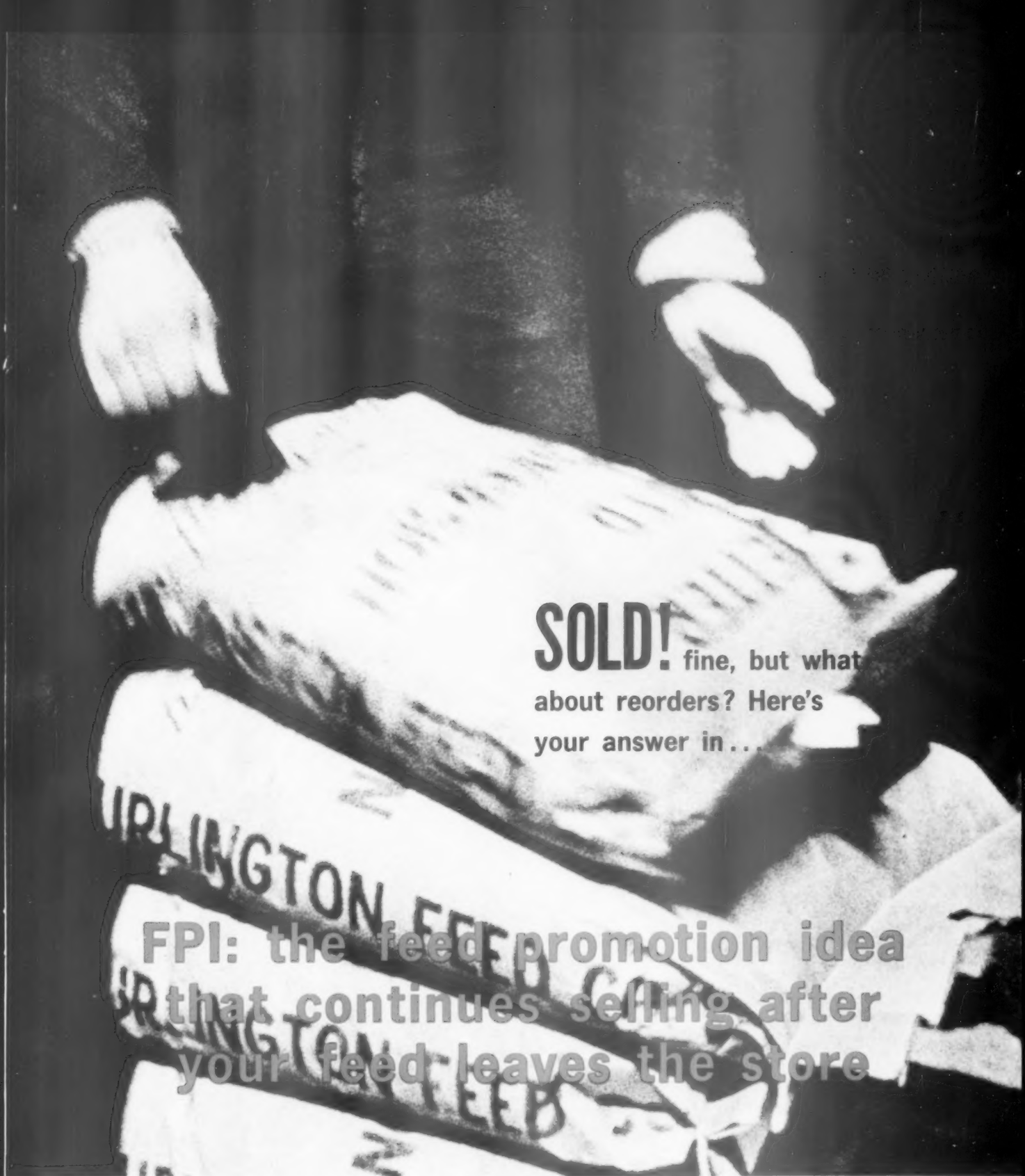

SOLD! fine, but what about reorders? Here's your answer in . . .
FPI: the feed promotion idea that continues selling after your feed leaves the store

Here's one feed promotion idea that never drags its feet . . . that keeps top-selling momentum and impact before the sale, after the sale—continuously. The result: a profit payoff through repeat business, new business . . . more customer satisfaction.

Getting your feed into the laying house is a golden opportunity to really convince your new customers of money-making advantages in your program . . . to build "swear-by-your-feed" customers who tell others about the good results.

Hess & Clark's FPI program—launched a year ago—does just that. As a part of your overall promotion, FPI helps you sell new customers and convince them they made the right choice. Its continuous selling makes reorders the order of business. FPI helps you do this with a . . .

Full Performance Index for egg producers. FPI is a feeding-management plan designed to help poultrymen make more money. It sets profitable, practical full performance goals for laying flocks: 250 eggs per bird; 4.5 lbs. feed per dozen eggs; 90% Grade A eggs; and 90% laying house livability. Then FPI gives the formula for meeting these goals—good birds, good feed, good management PLUS the . . .

Full Potential Ingredient—nf-180. Added to your feeds, nf-180 frees layers from *constant disease drag*—the subclinical infections present in almost every flock which often rob feeds of egg-producing power. With nf-180 in the feed, poultrymen almost always see an improvement in flock performance . . . usually a *substantial* improvement. Many feed men confidently use nf-180-medicated feeds to demonstrate their feed superiority in split flock tests.

Turn the page for more facts about FPI . . . the *Feed Promotion Idea* that helps you turn prospects into customers . . . that helps you keep your present customers 100% sold.

how FPI sells and resells your layer feeds

Good feed performance depends on *far more* than just good feed. It depends on good birds; good housing and equipment; conscientious management and sanitation. If a customer skimps on any of these factors, his profits will suffer. And quite likely, he'll blame your feed.

The Full Performance Index program is your answer to this problem. It's a management guide that emphasizes the importance of *all* factors of egg production . . . and it points out that, even with all these factors in balance, birds still may fall short of full performance goals.

Why they fall short is a result of *constant disease drag*—subclinical infection. FPI's answer is nf-180 — the *Full Potential Ingredient* that clears up these low-level diseases, enables layers to utilize the full egg producing power formulated into your feed. nf-180 makes a real "see-it-with-your-own-eyes" improvement in feed performance, even in the best-managed flocks . . . and gives your salesman the most powerful selling story of the year.

Your servicemen, incidentally, will like the FPI-nf-180 program, too. They'll have far fewer calls for stress-and-disease-caused troubles . . . happier customers to call on when making routine checks.

FPI, then, gives your customers goals to shoot for. It gives them a management guide. And it gives *you* a *Full Potential Ingredient* for your feeds that helps you help your customers meet these goals. FPI is a sound program that convinces practically every user he has made the right feed choice. In fact, a recent survey of farmers who tried nf-180 showed that 88.2% were well satisfied with the results . . . a remarkably high percentage of user satisfaction.

The man in the picture—feed dealer George C. Black of Summerville, Ga.—is one of many feed men who sell new customers by suggesting they put test flocks on nf-180-medicated feed.

"I had this real good prospect with several thousand layers," Black relates. "I had been trying to get his business for a long time, but he kept telling me he was satisfied with his present feed. Finally I talked him into putting one 1300-bird house on one of my nf-180 feeds. He had another house of 1300 on his regular feed that we used as a control. When the birds peaked, our feed with nf-180 produced 100 more eggs a day than his regular feed. Now we feed all his birds. nf-180 helped us get this new customer."

"nf-180 keeps down a host of stresses and diseases," says 23,000-bird-owner Reginald Barton, Fayetteville, N.C. "I've used nf-180 for 2½ to 3 years and haven't had any disease problems. nf-180 keeps hens on feed . . . keeps them in production. I don't want to be without nf-180 in my feed."

"Extra livability decided me in favor of the nf-180 low-level program," says Donald Pardum, who raises 15,000 layers in North Highlands, Calif. "nf-180 also gives dependable production and overall good results. It keeps your birds from going into a costly slump. nf-180 pays for itself."

this nf-180-FPI program helps build solid layer feed customers like these . . . customers who stay sold on your brand of feed

"We ran a test between a feed containing nf-180 and my regular ration," says C. C. "Buddy" Hardy, who feeds 120,000 birds near League City, Texas. "The houses on nf-180 did so much better that we put our whole place on the nf-180 feed. Since then, production has been higher and steadier than ever before."

"We've had such good luck with nf-180 that I wouldn't be without it," says 4,000-bird-owner Kurt Kolberg, Galien, Michigan, who recently averaged 284 eggs per bird in a 1,237-pullet house. "Our local papers reported that as an example of what can be done," he says. "I give nf-180 much of the credit."

RESULTS! That's what sells layer feed. That's what makes nf-180—the Full Potential Ingredient—the most effective salesman you have

To convince yourself of the value of nf-180 in your feed, talk to poultrymen who use it. You'll find that most egg producers are far *more* than satisfied with nf-180. They are downright *enthusiastic*. The reason is that they have never seen anything make such an improvement in flock performance.

nf-180 is a completely different kind of drug—not a sulfa, not an antibiotic, not an arsenical. It is a man-made chemical . . . safe, nontoxic, with no harmful side-effects.

Unlike antibiotics, which simply hold germs in check, nf-180 actually *kills* germs. As a result, resistant germ varieties have little chance to develop.

In addition, nf-180 has a "broad bacterial spectrum." It attacks an extremely wide range of diseases . . . *prevents and controls more poultry diseases, in fact, than any other drug.* This is why a continuous low-level of nf-180 in your feed (25 grams furazolidone per ton of total ration) so effectively protects against stress effects and frees birds from constant disease drag.

This wide-range effectiveness also makes nf-180, at higher levels, invaluable in treating disease and getting slump-ridden flocks back to full production. We call this trouble-shooting use of nf-180 a "Two-week Tune-up." It's the ideal way to demonstrate to prospective customers the performance-boosting benefits of your nf-180-FPI feeds.

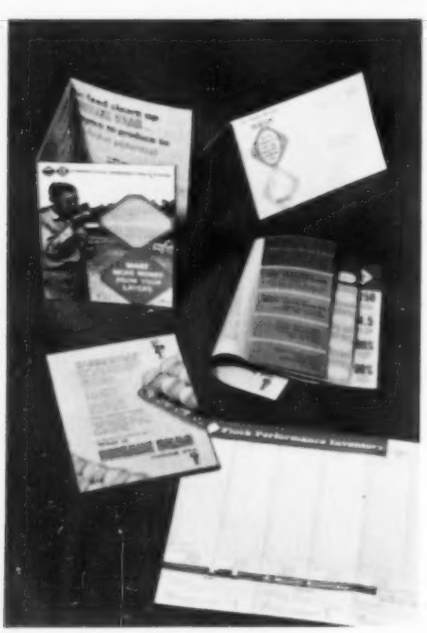
the first step: get your feed on the farm! the FPI program helps you do it with this . . . .

powerful dealer

here's a line-up of persuasive selling tools that enable dealers to tie-in solidly with national and regional FPI advertising (see back page). This FPI selling support has been remarkably successful in getting customers to try nf-180-medicated feeds. nf-180, in quality layer feeds, takes over from there.

most effective feed-selling tool ever for feed dealers!

This full-color, informative sound-slide film —"The Margin of Difference"—is an ideal way to tell the complete *Full Performance Index* story to your layer feed customers and prospects. Emphasizes the importance of setting egg production goals and keeping accurate daily records. Shows need for good birds, good feed, good housing and equipment, good management. Explains just what *constant disease drag* is . . . and how it often holds layers below their full bred-in, fed-in potential. Shows how your FPI laying feeds containing nf-180 can eliminate this problem. Gives case histories of men who have used nf-180 protective feeding for full layer performance. "The Margin of Difference" is approximately 12 minutes long. *It really sells!* It will help you hold the most "feed-sellin'" farmer meetings ever.



informative hand-out pieces, mailer, help sell FPI feeds

FPI "figure-it-out-yourself" folder is ideal for showing poultrymen how constant *disease drag* reduces profits. Eight-page FPI booklet and new "Make More Money" folder tell customers the complete FPI story . . . explain how your nf-180-FPI feeds boost layer income. And new FPI mailer that folds out to egg record chart will be saved and used for months.

useful management-helps for customers and prospects

This *Flock Performance Inventory* chart is the most complete, most useful egg record chart available to poultrymen. Makes it easy to check production, feed consumption, mortality and Grade A eggs against FPI goals. Pocket-sized Profit-Pointer dial shows nf-180 protection and treatment levels for specific diseases . . . explains all nf-180 feeding programs.

selling support

Colorful FPI display materials attract attention, identify your store as the place to buy nf-180-FPI layer feeds. *King-sized posters*—one featuring nf-180 low-level feeds and one featuring nf-180 "Two-week Tune-up" booster feeds—spotlight the benefits of your nf-180 rations. The *nf-180 Service Center* . . . a really unique and attention-getting counter-piece . . . is a center-of-interest in any feed store. Contains "take-home" information about FPI laying feeds and other nf-180 feed uses. Built-in Profit Pointer dial shows nf-180 level for protection and treatment of specific diseases. Your Hess and Clark salesman is the man to see for all FPI selling-aids.

a recent farm magazine survey of over 1,100 feed dealers gives solid proof that the FPI program really fires the interest of egg producers. The results show . . .

55.7% of feed dealers surveyed report direct inquiries from FPI magazine advertising . . . 60.5% increased sales of nf-180 feeds

In every part of the country—in every state—feed dealers report new customers and higher feed sales as a direct result of FPI advertising.

Radio listeners coast-to-coast are sold to the tune of the familiar, foot-tapping nf-180 jingle. Readers of leading farm and poultry magazines can hardly pick up an issue without seeing nf-180-FPI ads . . . ads that sell in a believable, effective way—by reporting tape-recorded interviews with nf-180 users.

Hess & Clark makes ads informative and factual to tell readers the full story, to *presell* them, to bring *real prospects* to the dealer's store—not just curiosity-seekers.

One man we interviewed said he *looks* for nf-180 interview ads every month. Another reported, "The ad gave me confidence the product would do what you said it would. Next time I bought feed, I thought, 'I'm going to see if nf-180 really does work.' It did, too."

The "sell-more-feed" results of nf-180-FPI advertising are demonstrated in the chart at right. It's a report on a mail survey of over 1,100 feed dealers in 11 states. The results are typical of what has been happening in most *every* state.

55.7% of all dealers answering reported direct inquiries from nf-180-FPI ads. Of the dealers reporting the actual *number* of inquiries, 23.9% said they received from 11 to 50 inquiries. The overall average was 8.9 inquiries per dealer. That's a lot of inquiries . . . a lot of prospects for future sales.

an example of nf-180-FPI selling effectiveness—a farm magazine survey of feed dealers in 11 states

	Have any farm people mentioned seeing these nf-180-FPI advertisements?		Have your sales of feeds containing nf-180 increased this year?		Have you developed any prospects for future layer feed sales?		Have you had any nf-180-FPI materials on display in your store?	
	YES	NO	YES	NO	YES	NO	YES	NO
Iowa	61.8%	38.2%	66.3%	23.6%	52.8%	12.4%	91.0%	9.0%
Illinois Indiana	57.0%	40.0%	63.0%	25.0%	58.0%	12.0%	90.0%	9.0%
Minnesota North Dakota South Dakota	59.4%	37.6%	64.3%	18.8%	51.5%	20.8%	80.2%	19.8%
Wisconsin	37.8%	58.9%	40.0%	42.2%	35.6%	22.2%	78.9%	18.9%
Missouri	66.7%	33.3%	70.7%	19.5%	74.4%	7.7%	88.1%	11.9%
Nebraska	56.7%	43.3%	63.4%	23.3%	60.0%	23.3%	60.0%	20.0%
Ohio	55.5%	44.5%	72.8%	18.4%	58.2%	17.3%	79.5%	20.5%
Kansas	45.5%	54.5%	50.0%	25.0%	40.0%	15.0%	78.3%	21.7%

Where percentages do not total 100%, some dealers did not know or didn't answer.

REMEMBER: 88.2% of farmers surveyed are pleased with nf-180 results—a good indication that your customers, too, will like nf-180. Your Hess & Clark salesman will be stopping with the full FPI story soon. In the meantime—if you missed this 14-page insert in an earlier Feedstuffs—write us for a copy. It reports how extension poultrymen, breeders and farm paper editors feel about the FPI management program . . . and contains case-histories of feed men and poultrymen who use it. Tells how Hess & Clark will help you get started with FPI.

HESS & CLARK
Ashland, Ohio
Division of Richardson-Merrell Inc.

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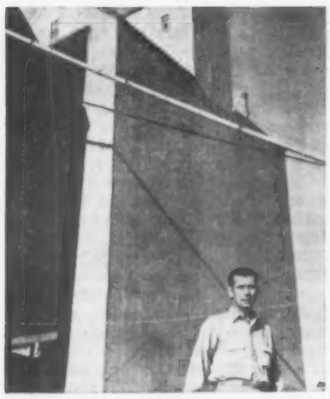

ELEVATOR OWNER — Jim Alfson, owner of the City Elevator Co. at Williston, N.D., is pictured here in front of his facilities where a steam roller unit was installed. He reports successful operation of the new equipment, which includes air lift, ½ ton vertical upright mixer and molasses mixing unit.

N. D. Feed Man Tells Of Rolling Operation

Feedstuffs Special Correspondent

WILLISTON, N.D. — The successful installation and winter-time operation of a new steam roller unit, complete with air lift, ½ ton vertical upright mixer, and molasses mixing unit, have been described by Jim Alfson, owner of the City Elevator Co. at Williston.

The combination air lift-steam rolling unit was the first of its kind in this northwestern North Dakota community. Other steam roller units are being installed in North Dakota.

"We feel we are doing a much better job of steam rolling our grains," states Mr. Alfson, "and the air lift helps us turn out a much better quality product. The lift will reduce temperatures and moisture which is necessary in storing barley over a reasonable period of time without spoilage. Installation of the steam roller gives our company a better outlet for low quality barley, and these low quality barleys can be purchased under sound, normal marketing conditions."

Capacity of the mill, a 15 in. x 48 in. crimping roll type unit, is rated at 10 tons per hour with a maximum rated capacity of 12 tons per hour. Rated grain storage capacity of the elevator is 150,000 bu.

The installation of the steam roller, mixer and molasses unit was felt to be necessary due to the increasing interest of livestock men in feeding cattle in the areas where they are produced, and the closeness to the sources of cheap grains in fattening cattle.

Current interest in the usage of high barley rations in the grain producing areas has many cattlemen thinking of the need to feed out cattle to finished weights in the areas where they are grown.

Mr. Alfson looks for increased cattle feeding in this section of the state in the next few years. His company services the northwestern portion of North Dakota and northeastern Montana.

The steam rolling equipment was installed by Wagner Mill & Machinery Co., Denver, Colo.

STEAM ROLLER UNIT—Successful installation and winter-time operation of a new steam roller unit with air lift, ½ ton vertical upright mixer and molasses mixing unit, have been explained by Jim Alfson (pictured here), owner of the City Elevator Co. at Williston, N.D. The mixer is located behind him and air lift is to left.

NELLIS
FEED COMPANY
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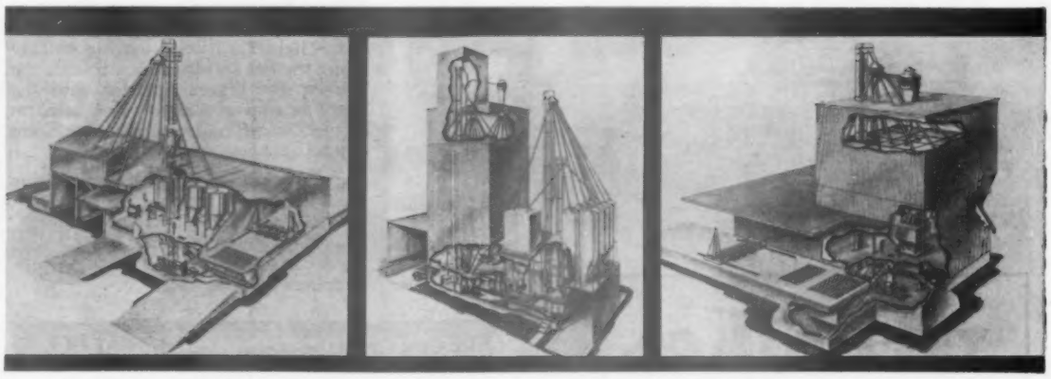

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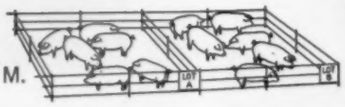
Putting Research To Work

BY SPENCER H. MORRISON, PH.D., D. V. M.



Molybdenum, Zinc and Unidentified Factor Sources in the Diet of Caged Layers

● C. H. Whiteside, T. M. Ferguson, B. L. Reid and J. R. Couch, Texas A&M College, Poultry Science, Vol. 40, No. 2, pp. 313-318.

ABSTRACT

A randomized block design was used in this trial consisting of 10 treatments with four replicate groups receiving each treatment. Two replicates contained eight birds each (Hylines), and two contained 10 birds, giving a total of 36 birds per treatment. Replicates were so arranged as to minimize differences due to location within the house. All birds were housed in individual cages and were 36 weeks of age at the initiation of the 28-week experiment. During the approximately 12-week period prior to the start of the experiment the birds had been fed a high energy ration containing a source of unidentified factors and adequate in known vitamins and minerals. The basal diet was comprised of the following: Ground yellow corn, 30%; ground milo, 30.25%; 44% soybean oil meal, 25%; animal tallow, 5%; defluorinated rock phosphate, 3½%; oyster shell flour, 2½%; 20% dehydrated alfalfa meal, 3%; salt, ¼%, and vitamin, antibiotic, trace mineral premix, ½%. The basal ration contained 10 gm. each per ton of penicillin and Aureomycin.

The various experimental treatments were as follows:

(1) None
(2) 0.5% antibiotic fermentation residue (Omafac)
(3) distillers dried solubles
(4) 0.1% tetra-alkylammonium stearate (dynafac)
(5) 2.5% condensed fish solubles
(6) 2.5% dried whey
(7) 2.5% dried whey plus 2.5% condensed fish solubles
(8) 9.1 ppm. molybdenum
(9) 20 ppm. zinc
(10) 0.1 ppm. molybdenum plus 20 ppm. zinc.

It should be pointed out that with respect to the vitamin, antibiotic and mineral premix used in the basal diet, only manganese sulfate was added with respect to trace minerals. The various supplements were added to the basal diet by adjustment of soybean oil meal and ground milo in order to maintain the same calculated crude protein level in all the diets. The diets contained approximately 17% crude protein, 2.25% Ca, 0.98% P and 992 Calories of P.E./lb.

The egg production for the hens fed the basal diet was 69.1% with increases of production noted at the 5% level of significance for the following experimental diets: Omafac, plus 3.9%; 3% distillers dried solubles, plus 2.7%; 2.5% condensed fish solubles, plus 2.3%; 2.5% dried whole whey, plus 2.6%, and the combination of 0.1 ppm. molybdenum plus 20 ppm. zinc, plus 2.9%. On the other hand, the addition of 0.1% tetra-alkylammonium stearate at the 0.1% level as a 20% active premix (dynafac), resulted in a significant depression (5% level) in production, minus 1.4%. The remaining three treatments had no effect on production.

Essentially no change was observed in egg weight due to any of the supplements to the basal diet. Although the differences were not significant, it was interesting to observe that when the eggs were divided into large sized grouping (more than 27 oz.), medium sized (24-27 oz.), and small sized (less than 24 oz.), the group receiving Mb and Zn produced 60.7% eggs of the largest size compared with the control group's 58.0%. Those diets containing Omafac, distillers dried solubles, dried whey, or Zn, produced eggs essentially of the same size as the control group. On the other hand, hens receiving dynafac, fish solubles, fish solubles in combination with whey, or Mb alone, produced only 55.0%, 51.1%, 53.2% and 47.5% large sized eggs, respectively. These figures may not be of significance, but if borne out by further research would have great practical significance as far as commercial operators are concerned.

Supplementation of the basal diet with a combination of Zn and Mb, or with single supplements of Omafac, distillers dried solubles, condensed fish solubles or dried whey, resulted in improved feed utilization when calculated on the basis of pounds of feed required to produce a dozen eggs. Those hens receiving diets containing Omafac, distillers dried solubles or dried whey gained from 27 to 69 gm. more in average body weight per hen than did the basal group. When receiving dynafac, condensed fish solubles or a combination of Zn and Mb as supplements, the hens gained from 19 to 52 gm. per hen less than the basal group, on the average.

COMMENT

Although dynafac did not give a response in this trial with caged layers, it should be noted that the experimental basal already contained good levels of both penicillin and Aureomycin; therefore, it is highly unlikely that any results could be expected with additions of this compound. We still need more work with dynafac in poultry rations before sensible recommendations can be made; but, as yet results so far reported and observed in the field have not been particularly outstanding—at least not any better than with antibiotics and often not as good.

From this work it appears that when formulating caged layer rations we should not "cut it too thin" with regard to sources of unidentified factors. It has always been my opinion that caged layers should have rations which are more critically formulated than birds on the floor since they have little or no opportunity to pick up unidentified factors from the litter, etc. The same probably holds true to a somewhat less degree for birds in colony cages or on slat floors, although real solid experimental evidence on this point is presently lacking.

●

Timely and Worth Noting

The metabolizable energy value of oats of various bushel weights has been determined by the North Dakota Station (Lockhart et al., Poultry Science, 40, 2, pp. 327-333). Turkey poults were used as the assay animals, and it is possible that differences may exist between some of the previously noted M.E. values in this column using chicks. Nevertheless the data are useful and add to our expanding storehouse of information on M.E. values for poultry.

The energy value was found to be

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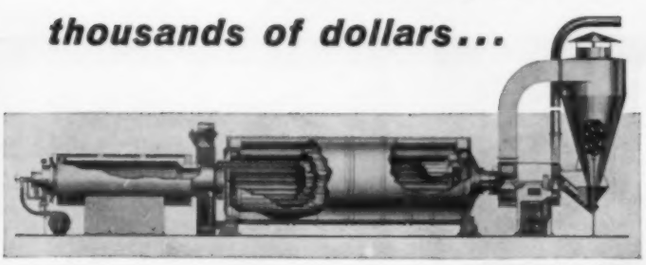

Cutaway view of complete Heil dryer with discharge end at right.

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taomyxin™ (Pfizer) oleandomycin and oxytetracycline

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more closely related to per cent groat than bushel weight. Fourteen samples of oats varying in bushel weight from 22 to 40 lb. and five different samples of oat hulls were used as the basis for deriving the values obtained. The M.E. value of the oats changed directly with increase or decrease in bushel weight and on the basis of the data. Oats having test weights of 32 and 40 lb. per bu. should contain approximately 1143 and 1319 M.E. per pound, respectively. The length of the hull of threshed oats actually decreases and is inversely proportionate to the M.E. value and the length of groat. Thus, the length of hull decreases, the length of groat increases. Oats containing 50 and 80% groats should contain about 900 and 1,300 M.E. Calories, respectively.

The oat hull values were quite variable due to the contents of weed seed, cracked grain and, possibly, some groat contamination. The range was from 200 to 500 M.E. Calories, with the best value, according to these data, at about 230 M.E. Calories per pound.

March Consumption Of Feedstuffs Off

WASHINGTON — Consumption of commercial feedstuffs during March totaled 1.7 million tons, slightly more than in February but 75,000 tons below March 1960, according to the U.S. Department of Agriculture.

USDA said that consumption during the first half of the season totaled 10.9 million tons as against 10.4 million in the first half of 1959-60 and the 9.4 million five-year average.

The USDA report says that the number of grain-consuming animal units to be fed in 1960-61 is estimated at 166.2 million as against 165.4 million in 1959-60 and the 163.2 million average.

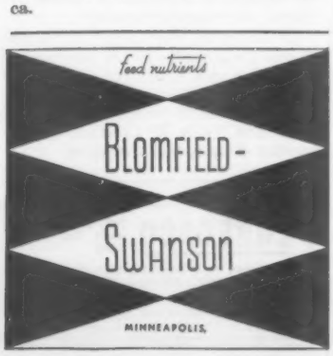
These data indicate, says USDA, that 131 lb. of feed was fed per animal unit in the first half of this season compared with 126 lb. in the same period last season and the 115 lb. average.

USDA reported that oilseed meal consumption of 6.6 million tons for October to March was nearly 400,000 tons above the same months last season. Practically all of the increase was in soybean meal with disappearance the first half of this year at 4.7 million tons. A reduction of 50,000 tons in cottonseed meal disappearance was about offset by larger consumption of the other oilseed meals. Exports of oilseed meals of around 375,000 tons, October to March, was 200,000 tons below the same period last year, according to USDA.

Consumption of grain by-products during the first half of the season was about the same as a year earlier. Larger supplies of wheat and rice millfeeds were offset by the smaller output of gluten feed and meal and distillers' dried grains. Smaller production of fish meal was about offset by larger imports with supplies about the same as a year ago, according to the USDA figures. Shipments of alfalfa meal, October through March, totaled 642,000 tons, up 5% from last year.

CHECKING POULTRY PROGRAM —A check of program details for the Pennsylvania Poultry Federation's annual conference to be held at Pennsylvania State University, University Park, Pa., June 29-30, is under way here. From left to right are George H. Schroeder, Honesdale, Pa., representative of Limestone Products Corp. of America, and president of Pennsylvania Poultry Federation; Dr. Glenn O. Bressler, University Park, Pa., chairman of the educational sessions committee; and Thomas E. Moncrief, "Everybody's Poultry Magazine," Hanover, Pa.

FEED MILL AT SHOW—One of the features of the U.S. exhibit at the recent Cairo International Agricultural Exhibition was a complete feed milling unit which was in operation throughout the month-long show. The men shown above are taking a look as the demonstration mill operation is explained. This unit provided feed for chickens and livestock exhibited at the show while demonstrating U.S. technology in feed processing equipment. Designed and manufactured by Myers-Sherman Co., Streator, Ill., this compact unit consisted of a scale-mounted ingredient hopper, roller mill, vertical mixer, finished feed hopper and a small elevator leg. C. Robert Myers, president of the firm, explained its operation to many of the 1 million visitors attending the show, the firm said. Taking a good look as Mr. Myers explains the operation are, left to right: Andre Tawa, director, Soybean Council of America, Cairo; Mr. Myers; Dr. Jake L. Krider, vice president, Soybean Council of America, and Howard T. Roach, president, Soybean Council of America.



Someone's not using Ray Ewing . . .

Fed up with your feed? Start using Ray Ewing's performance-proved Turkey Program. It's custom-tailored and field-tested for your customer's particular requirements. Finishes birds early and economically. As with all Ray Ewing products, *"Quality Goes In Before The Name Goes On."* That's why

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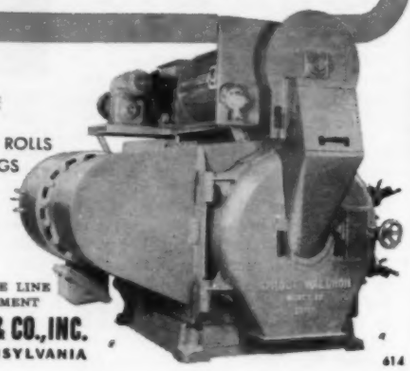


AMERICA'S MOST COMPLETE LINE OF FEED MILLING EQUIPMENT

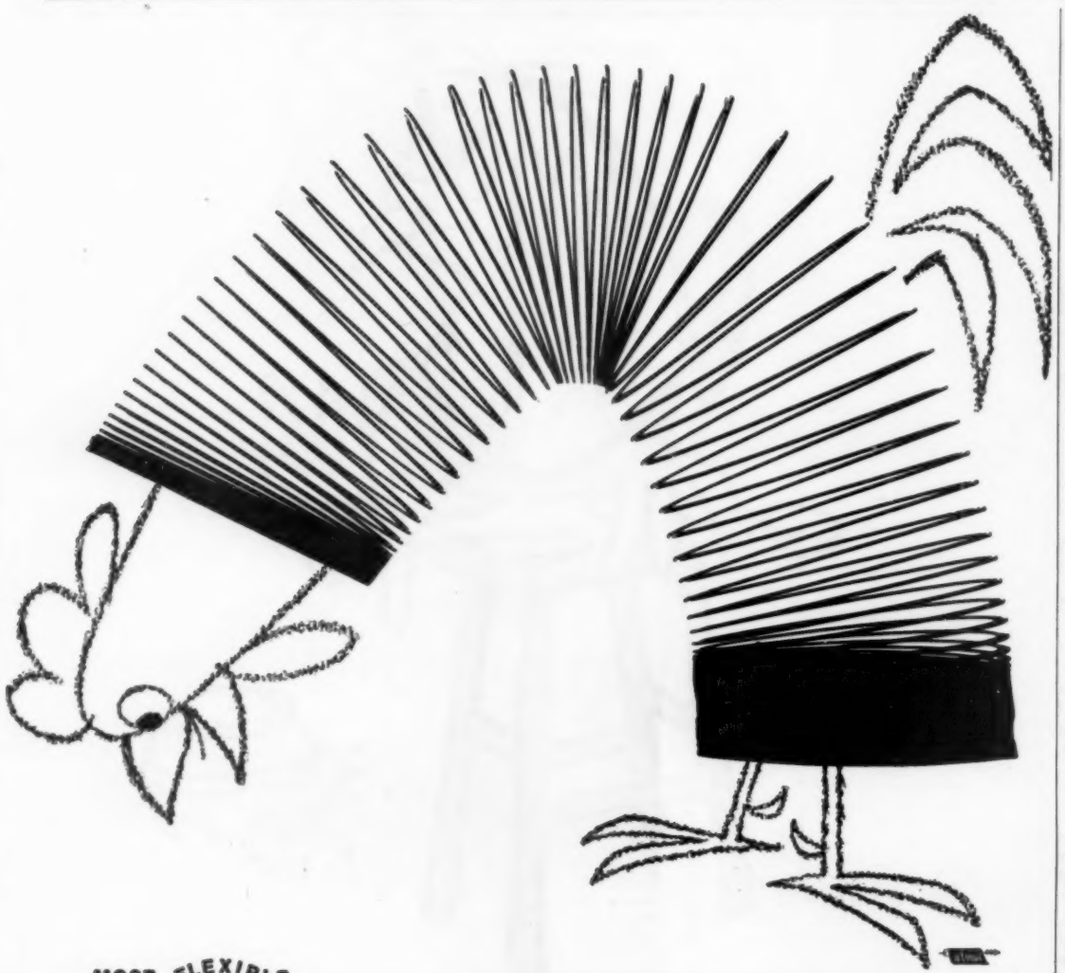
SPROUT, WALDRON & CO., INC.

MUNCY, PENNSYLVANIA

SINCE 1865

614

PRODUCT PROVING FARM—D. E. Horn & Co., Inc., York, Pa., recently opened the starting unit of its product proving farm. Pictured here, the unit will be used to experiment with and to prove Hornco broiler ration, chick starting and growing rations and turkey starting rations. The building is of pole type construction, with aluminum sides and roof, and is completely insulated. The house is 120 ft. by 40 ft., and is divided into 36 pens 6 ft. by 16 ft. Brooding is accomplished by a hot water radiant type system. All results of this house will be evaluated by the nutritional staff of D. E. Horn & Co., Inc. As new methods are proven, they will be incorporated into the Hornco feeding programs.



MOST FLEXIBLE TRACE MINERALIZED MIXING SALT ON THE MARKET...MORTON POULTRY MIXING SALT

Flexibility is the key word with Morton Trace Mineralized Poultry Mixing Salt. It is formulated to be flexible enough for economical use at levels from five pounds per ton of complete poultry feed, to ten pounds per ton. As you know, the three most essential trace elements for poultry are Manganese, Zinc and Iodine. Morton Poultry Mixing Salt supplies *only* these three trace elements. In other words, Morton has concentrated on maximum flexibility and economy.

Research has also given Morton Poultry Mixing Salt superior compounds that are all water insoluble, plus a new and improved anti-segregation agent. As a Morton customer, you can be sure of getting the *correct* trace minerals . . . you can be sure they will *remain* in your feed . . . and that they will be *distributed uniformly!*

Morton offers a complete line of Trace-Mineralized, Iodized and Special Mixing Salts, each backed by Morton's extensive research department. For more information, ask your Morton Representative for complete details, or write directly to Morton Salt Company.

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Speakers Named for Pacific Northwest Grain Dealers Event

SPOKANE, WASH. — Pacific Northwest Grain Dealers Assn. 40th annual convention here June 15-16 will have "an old friend" as one of the featured speakers, Jack Hallett, Colfax, convention chairman, announced.

The speaker is G. E. (Pete) Stallcop, former executive secretary of the PNWGDA and since 1956 executive secretary of the Northwest Country Elevator Assn. at Minneapolis. Mr. Stallcop is a native of Pomeroy, and a graduate of Washington State University in agricultural economics. He will discuss national grain problems in his talk to the annual meeting.

Another speaker will be Sydney Harris, director of the Portland office of the Commodity Stabilization Service. Mr. Harris is a native of Payette, Idaho. He has served with the department of agriculture's several bureaus since graduating from the University of Idaho. He has been in the Portland CSS office since 1951.

Mr. Hallett said that the convention will follow a procedure which was started last year of having the warehouse committee meeting start on Thursday morning as a general open convention session. Other committees will also meet on Thursday and the general business session will be Friday.

Corn Exchange of Buffalo Elects

BUFFALO—The Corn Exchange of Buffalo elected Stanley A. Tirrell, general manager of the Pillsbury Co. Buffalo Grain Merchandising Division as president. He succeeds Irving M. Hyland, eastern regional manager and an assistant vice president of Cargill, Inc.

Charles R. Coad, General Mills, Inc., grain buyer, was elected vice president, and James E. O'Connell, general manager, Standard Milling Co. Standard Elevator & Grain Division, was named treasurer.

Directors of the exchange named Frank Catanzarite to the new post of executive vice president and secretary. He has been executive secretary and traffic commissioner since 1956. Mrs. Lucy R. Leonard was reappointed assistant treasurer.

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Distributed by: Warren-Douglas Chemical Co.

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The Changing Farm Market— Its Significance to Suppliers Of Farm Production Inputs

"Marketers will have to become more discriminating in their choice of methods of communicating with farmers. . . . Channels of distribution will become shorter and more highly specialized. . . . Marketers will be more sensitive to the services needed by farmers."

By Elmer C. Denis
Doane Agricultural Service

EDITOR'S NOTE: Several points of interest to firms manufacturing and distributing feed, as well as other farm supplies, are offered in the accompanying article. Mr. Denis, manager, research division, Doane Agricultural Service, points out that there will be continued and accelerated changes in agriculture and that wider differences in type of farm and type of operators will continue to develop. This will require changes in communicating with and distributing products to farmers. "The future is full of problems for the poorly informed, tradition-bound marketers," said Mr. Denis. "It can be a veritable gold mine for the well informed and progessive marketers." This article is from a talk at a meeting of the Kansas City chapter of the American Marketing Assn.

We all hear a lot of grumbling about the depressed plight and declining importance of agriculture from vociferous preachers of gloom, doom and pessimism. Fortunately, there is another group whose actions, more forcefully than their words, give a completely different version—the action-centered proponents of a progressive, growing and productive agriculture.

Dr. Earl Butz, dean of agriculture at Purdue University, couches this conflicting outlook in these words, "Entirely too many people in this country think of agriculture as a declining industry. American agriculture is an expanding industry in every important respect except one—the number of people required to run our farms. We don't think of air transportation as a declining industry just because a pilot in a jet airliner can now take 100 passengers from coast to coast in half a day, as compared with 20 passengers in a day and a half two decades ago. This, like agriculture, is a strong and growing industry."

Nation's Largest Industry

Agriculture is the nation's biggest industry. It employs 7.4 million workers—more than are employed in the steel industry, or the automobile industry, or transportation and public utilities combined.

Investment in agriculture exceeds $203 billion, equal to three fourths the value of current assets of all corporations in the U.S., or three fourths of the market value of all corporation stock on the New York Stock Exchange. In agriculture there is $21,300 invested for each farm employee, compared to $15,900 for each worker in the manufacturing industry.

Farmers spend $25-26 billion a year for goods and service to produce crops and livestock. This includes $2.5-3.3 billion for new tractors and other motor vehicles (about $1 billion was spent in 1959 by the prime iron and steel industry for equipment and new plants), $3.5 billion for fuel, lubricants and maintaining of machinery and motor vehicles, and $1.5 billion for fertilizer and lime.

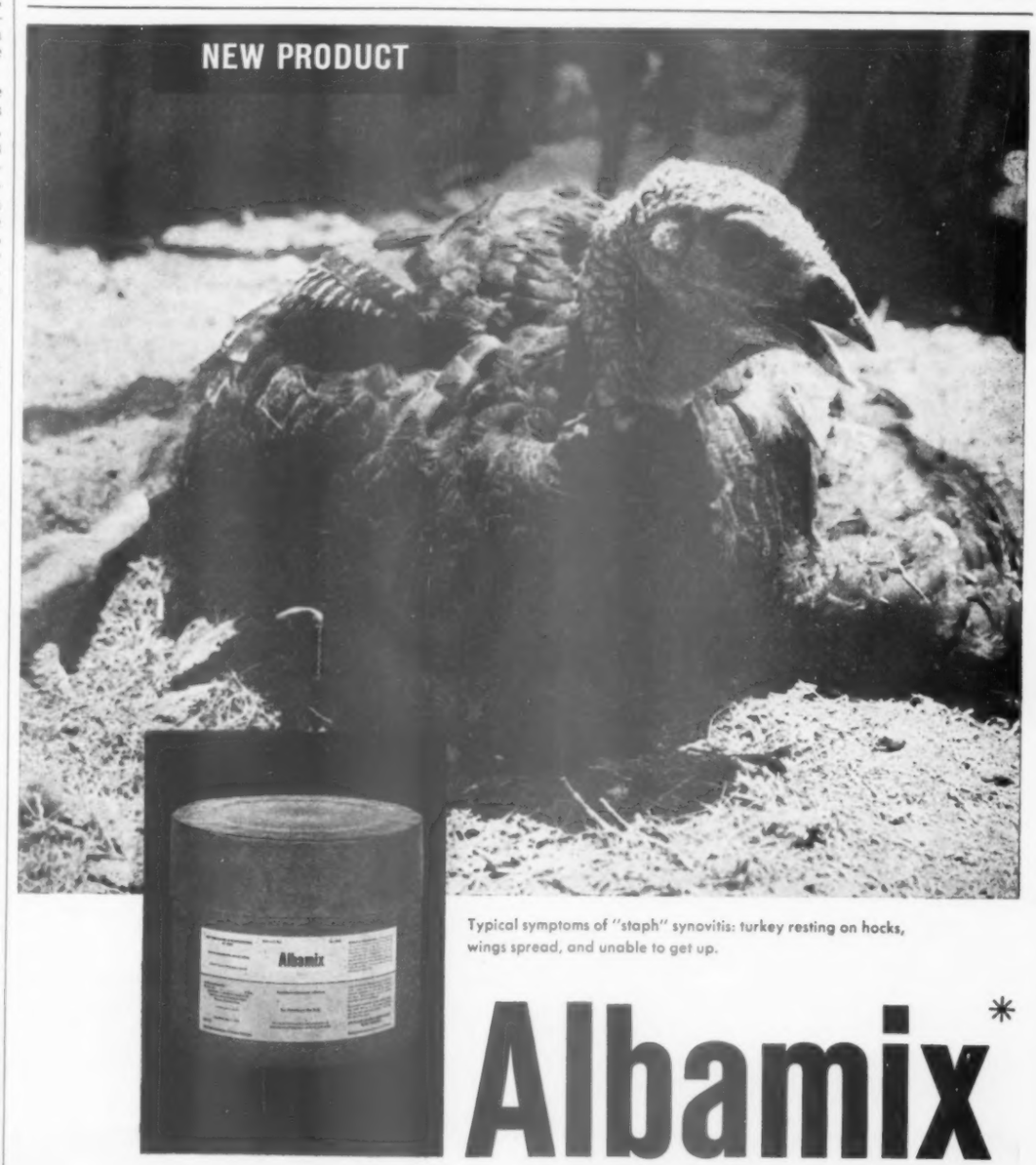
This does not say that agriculture is not undergoing a change. Quite the contrary, it is an industry that is currently experiencing an accelerated rate of change—representing in many respects, one of the most dynamic markets which American industry has to supply and service.

The current census of agriculture shows a 36.2% increase in the number of farms with gross income above $10,000, and a 30.2% decrease in the number of farms with gross income below $2,500 in the last five years. But these figures do not reveal the most significant changes.

The census reports "much greater specialization and commercialization in the production of many farm products occurred during the last five years than during any 10-year period recorded by the farm census. Notwithstanding increases in the value of products sold or quantity produced, farms having milk cows declined 39%, farms raising turkeys declined 49%, farms selling eggs dropped 37%, farms raising vegetables for sale decreased 35%, farms harvesting Irish potatoes decreased 52%, and farms harvesting cotton declined 41%.

"These changes reflect rapid technological advances in production practices, sweeping changes in the organization and operation of individual farms, the rapid increase on many individual farms in the use of nonfarm inputs, and the discontinuance of production by small producers with small-scale operations."

These changes reflect a turnabout in the advice which is beamed at the



Typical symptoms of "staph" synovitis: turkey resting on hocks, wings spread, and unable to get up.

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farmer from many sources. During and shortly after the great depression, the farmer was advised, "Don't put all your eggs in one basket—diversify." Now he is being told, "Put all your eggs in one basket—specialize."

In general, this is good advice and it is being rapidly accepted because it is good advice. But beyond that, specialization in agriculture is being accepted because it is universal. The farmer is exposed to it, and recognizes its benefits in education, medicine, industry and many more of his non-farm contacts. Consequently, he is exposed to both direct and indirect evidence of the advantages of specialization.

This shift to specialization necessitates a re-evaluation of resource allocation, farm organization, operation and practices. Some farmers are doing this gradually, relying on their innate judgment and experience. More and more are turning to more sophisticated methods—high speed computers and linear programming techniques.

What effect do these changes have on the marketing programs of those who supply the farmers' production inputs? Let's examine three:

(1) Methods of communicating with farmers.

(2) The channels of distribution.

(3) The types of service that farmers need.

METHODS OF COMMUNICATING WITH FARMERS—The overall reduction in number of farms, coupled with the additional reduction of specific types of farms due to specialization e.g., dairy farms, has resulted in drastic reduction in the number of potential farm customers for certain types of products. This has caused some advertisers to re-evaluate the criteria for selection of media in which to advertise. More and more emphasis will be placed on quality of subscription lists rather than quantity.

Advertisers in the future may well examine the cost of exposure per $1,000 of purchasing power represented by the media, rather than number of potential customers alone. One media may represent an average of $900 purchasing power per subscriber for a product, while another may represent only $350.

If you expect a cumulative or residual effect from advertising over time, the choice of quality vs. quantity aspects of subscriber lists may have significant bearing on long run success or failure.

Choice of media may be entirely different in one stage of new product introduction than in another. Much is now known about the process by which farmers learn about and adopt new products and new practices and more is being discovered almost every day.

All farmers do not rely on the same sources for their information. Some farmers rely more on personal rather than impersonal sources for information. There is a vast difference in the extent to which farmers travel to secure information to aid in their management decisions.

Specialization of farm enterprises poses some problems in presenting the advertising message. Where a product has application to more than one crop, for example, the advertising message may need to be beamed specifically at each crop, rather than general to all crops.

THE CHANNELS OF DISTRIBUTION THROUGH WHICH PRODUCTS REACH THE NEW FARM MARKET—We have seen considerable change in the role of dealers as one of the links in the distribution system of farm supply items. We fully expect to see even more sweeping changes in the future.

There is a strong tendency for manufacturers to by-pass the dealer and go direct to the larger farm operators. This is particularly true with feed, animal health products and agricultural chemicals.

One feed marketer, for example, discovered that in one market area he had 65% of the feed customers but only 12% of the feed volume. This shift in volume customers occurred over time, but over a relatively short period of time. This occurred primarily as a result of different methods of distribution introduced by competition, which, being more efficient, also produced a competitive price advantage.

This shift of more farmers into the higher income brackets has produced some very interesting changes in dealer-customer relationships. Doane conducts an annual study of the farm petroleum market through the Doane Countrywide Farm Panel. These studies revealed that one of the companies was gradually losing its share of market position. Further study of the data indicated that a very high percentage of its customers were among the lower income group of farmers. Obviously, its marketing and distribution system was not adjusting to the changes which were occurring in the farm market. Naturally, the question arose why has this happened and what can be done to correct it?

Our staff had had some experience in the building supply field which gave us a clue. We had found that many rural lumber dealers were becoming less effective in merchandising building materials. An analysis of this situation revealed that there had been a reversal in the economic and social status of farmers relative to the lumber dealer. Many farmers were really operating a larger business on a more business-like basis than some lumber dealers. The farmers' leadership status and influence in the community were higher than the dealers'. Consequently, many dealers had lost influence and bargaining position with their better potential customers.

We have a hunch that this is also true among local petroleum dealers and jobbers. This led us to design a study to determine how farmers perceive their local petroleum supplier, and to determine if there is any difference in farmers' perception of dealers associated with various income and adapter groups. This study is currently in progress.

The rapid introduction of a new technology into agriculture through new products poses some real problems in distribution, particularly with dealers. This is especially acute in the animal health product and agricultural chemicals industries. Dealer personnel dealing with farmers are finding it increasingly more difficult to even keep up with the better farmers' knowledge of the rapidly growing number of new products.

Firms marketing to farmers have many adjustments to make in their distribution systems during the next 5 to 10 years. This will require a rather clear understanding of what future marketing conditions will be or else many needed changes will be recognized too late.

THE TYPES OF SERVICES THAT FARMERS WILL NEED—Services incidential to the sale of products to farmers have been employed for some time. Some have been mere gimmicks, while others have served a needed and vital role in the marketing program.

Almost without exception, services add to the cost of marketing. This, of course, should always raise the question as to whether the added cost of a proposed service can be justified.

As marketing we may think that a service has value, but does the farmer recognize its value? How much is the service worth per unit of product? Can the farmer be shown its value in dollars and cents? Can he get the service from you and the product from a competitor at a lower price? Will the competition immediately adopt this service practice and neutralize any advantage?

I am of the opinion that services, particularly those that fall in the category of gimmicks, are merely resulting in lowering marketers' margins, raising the farmer's cost and lining the pockets of gimmicks manufacturers.

Services Needed

There are services which are needed and which could benefit both farmers and those who supply them. I can cite only a couple as examples here.

We are on the threshold of a revolution in farm automation—particularly in the farmstead. I think the greatest deterrent to this development at present is the lack of the service needed to plan, install and maintain such operations.

Technically, we have the products and know how to automate feed lots for dairy, hogs, beef, poultry, etc.—yet relatively few are automated to any great extent. Most farmers who have installed operations of this type either spent a great deal of time in detailed planning, or employed professional help, or both. He had to buy a timer here, a motor there, concrete from still another etc. He faced such questions as: What size motor should he use? What phase current? What type conveyor should he use? How can he plan for expansion? Where will he be able to get service in emergencies?

Any real breakthrough in farmstead automation will be either through development of standardized installations which the farmer can buy as a unit or the establishment of agencies which can coordinate the planning and installation of custom units.

Let's turn to the second and last example of services needed. As we develop more sophisticated and toxic farm chemicals, closer liaison between manufacturer and farmer will be needed. All the varied conditions existing in the field cannot be duplicated in the laboratory. Some companies are establishing controlled distribution for new products during the initial period of introduction. This reduces many of the risks in bridging the gap from laboratory to commercial field use of new products.

The high investment required to bring a new product into the market necessitates taking all reasonable precautions to gain early acceptance. With the rapid advance in technology, generally, I think marketers should expect a shorter market life for products that are subject to obsolescence by new and improved products. Therefore, the pressure is on to gain rapid acceptance and fast amortizations of development costs.

SUMMARY—Let's summarize with these points:

(1) By many measures, agriculture is the nation's biggest industry and by most measures it is still growing.

(2) The last five years have recorded more change in agriculture than in any other period in census history.

(3) Even greater change is almost certain to be recorded in the next five years.

(4) Wider differences in type of farm and type of operators will continue to develop.

(5) This will require marketers to become more discriminating in their choice of methods in communicating with farmers.

(6) Channels of distribution for many products will become shorter and more highly specialized.

(7) Marketers will be more sensitive to the services needed by farmers, particularly those that represent prime customers.

The future is full of problems for the poorly informed, tradition-bound marketers. It can be a veritable gold mine for the well informed and progressive marketers.

Simple, Rugged Construction of

Wenger Multi-Duty Pelleting Systems

Produce every feed your customers need!

The Multi-Duty offers you unmatched versatility. Simple rugged construction. Ease of service. Shock absorbing V-belt drives—the modern means of power transmission.
Fly wheel action of massive driven sheave keeps mill pulling smoothly and quietly even through toughest formulas. Eliminates chattering and damaging vibration.
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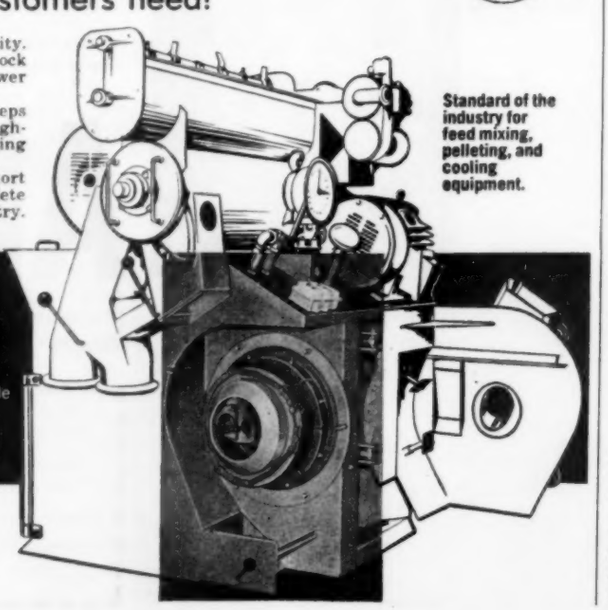
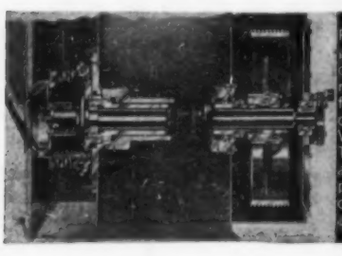


Standard of the industry for feed mixing, pelleting, and cooling equipment.



From the gaping mouth of the new roughage feeder to the quiet positive V-belt drives. The most simple and rugged pellet mill design available.

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James F. Bell, Founder Of General Mills, Inc., Dies at Age 81

MINNEAPOLIS — James F. Bell, founder, first president and first chairman of the board of General Mills, Inc., died May 7, at Abbott Hospital in Minneapolis. He was 81.

James F. Bell

Mr. Bell was internationally known as an explorer of ideas and statesman of business. "He was a man of insatiable intellectual curiosity," said Gerald S. Kennedy, present chairman of the board of General Mills. "He was never satisfied with the present except as it prepared for the future. Research was his lodestar.

"No conflict of interest ever diverted him from his appointed task. He was single-minded in his determination to accept nothing but the best."

Federal Appointment

Immediately after his graduation, Mr. Bell joined the Washburn Crosby Co. In 1909, at age 30, he was elected a director of the firm. While still a young man, during World War I, he was appointed by the U.S. Food Administration as chairman of the milling division.

After returning to the Washburn Crosby Co. in 1919, he quickly set about executing some of the ideas that had been germinating in his mind while he served the government. He established a special department to serve the milling industry's largest customer—the baker. He also helped to embark Betty Crocker on her career as friend of the homemaker.

In 1928, he engineered the formation of General Mills by joining the Washburn Crosby Co., Royal Milling Co. of Great Falls, Mont., with its subsidiary Rocky Mountain Elevator Co., the Kalispell Flour Mill Co., also of Montana, and the Red Star Milling Co. of Wichita, Kansas. In a few months were added the El Reno Mill & Elevator Co. of El Reno, Okla., the "Kell Group" of milling and elevator properties located in Texas and Oklahoma, the Sperry Flour Co. of the far West and the Larrowe Milling Co. of Detroit, maker of formula feeds. This formation created the largest flour milling concern in the world.

Mr. Bell served as first president and first chairman of the board of the new corporation, retiring as head of the board of directors in November, 1947, effective Jan. 1, 1948. He continued as a member of the board, serving for many years as chairman of its committee on finance and technological progress.

Born in Philadelphia on Aug. 16, 1879, James F. Bell came to Minneapolis as a boy of nine after the Washburn Crosby Co. had asked his father, James S., to join the firm as partner and general manager. He was graduated from Minnesota in 1901 with a major in chemistry, meanwhile finding time to set up what is believed to have been the first laboratory for testing flour. He was 23 when he married Louise Heffelfinger of Minneapolis, whose death preceded his by just 12 days. They had three sons and a daughter: Ford, chairman of the board of Red Owl Stores, with offices in Hopkins, Minn.; Charles H., now president of General Mills; Samuel, a rancher near Chandler, Ariz., and Sally, now Mrs. Herbert O. Perry, who resides in California.

Cobb Names Manager For Canadian Plant

CONCORD, MASS. — Ellis Farmwald, former assistant manager of the Cobb White Rock distribution center at Gainesville, Ga., has been named manager of the new Cobb plant in Canada, it was announced by Robert C. Cobb, Jr., vice president of Cobb's Pedigreed Chicks, Inc., Concord, Mass.

Ellis Farmwald

Mr. Farmwald was raised on an Ohio farm, and is a graduate of Goshen College, Goshen, Ind. He spent more than four years working with the Cobb breeding stock distribution center there, then shifted to the plant at Gainesville, Ga. After additional training at Cobb headquarters in Concord, Mr. Farmwald took up his duties at the new center located at Frelighsburg, Quebec, Canada.

The new organization, known as Cobb's Pedigreed Chicks, Ltd., Quebec, is part of Cobb's expanded program of international distribution, and is specifically designed to provide improved service to the broiler industry in the Quebec and Ontario provinces, officials said.

Names Peru Distributor

VINELAND, N.J.—Hugo Espinoza, businessman in Peru, has been appointed exclusive distributor in Peru for Vineland (N.J.) Poultry Laboratories.

Mr. Espinoza recently spent a week studying the firm's production and marketing operations. He will service the Peruvian market with the full line of Vineland's vaccines, drugs and biologics.

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Questions I'm asked about

vitamin **D** *fortification*

Dr. G. C. Wallis, recognized authority in the field of Vitamin D₃ nutrition for livestock

Q: Will two to five pounds of good sun-cured hay provide enough vitamin D for my dairy cows?

A: No. Sun-cured hay varies widely and unpredictably in vitamin D content—80 units to 1,250 units per pound have been reported for sun-cured alfalfa hay. Two to five pounds of lower potency hay would provide about 200 to 500 units per cow per day which is insignificant. Even though the hay happened to be high in vitamin D, there would be only a modest contribution made toward the suggested optimum intake of 6,000 to 8,000 units per pound of dairy ration.

Q: How can I check to make sure my dairy cows are receiving enough vitamin D?

A: Good safeguards can be taken but an absolute check is probably not possible. Optimum vitamin D levels for top performance and longevity have not been clearly established but work is in progress. Mild deficiencies are often difficult or impossible to detect but they can be costly. Available information suggests the use of 6,000 to 8,000 units of vitamin D per pound of complete grain ration. Confidence in your feed manufacturer and the good performance of his well-formulated rations would be important for users of commercial feeds.

Q: Is there any danger of my feeds having too much vitamin D?

A: Our recommendations for the vitamin D fortification of feeds are well within the generally recognized safe limits of vitamin D intake for the different species of animals. With careful methods and efficient modern mixing equipment feed manufacturers are able to achieve good distribution of micro-ingredients. The chance of overdosage is remote.

Q: How much vitamin D do baby pigs and growing-finishing pigs need?

A: Early weaning, fast growth, confinement raising, multiple farrowing and other changes have greatly increased nutritional stress factors since the vitamin D requirements of pigs have been carefully studied. Based largely on amounts that have given good results in experimental and practical swine raising programs, a number of Experiment Stations are suggesting about 500 units of vitamin D per pound of milk replacer and starter with somewhat smaller amounts as pigs approach market weight.

Q: Do sheep get enough vitamin D from natural sources?

A: Not always. For instance, in recent English studies lambs from ewes given supplemental vitamin D averaged 6 pounds heavier at weaning in one flock and 9 pounds heavier in another than lambs from ewes given no vitamin D. Fleeces from experimental animals were more than ½ pound heavier, graded higher, and brought a premium price.

D. C. Wallis

For more complete answers to any of these questions write to Dr. G. C. Wallis, Director of Nutrition, Agricultural Department, Standard Brands Incorporated, 625 Madison Avenue, New York 22, N. Y.

Fleischmann's Fidy Irradiated Dry Yeast
rich in vitamin D for four-footed animals

another fine product of
Standard Brands Incorporated

These educational advertisements tell farmers about

THE IMPORTANCE OF VITAMIN D FORTIFICATION

Sunshine and sun-cured roughages are undependable sources of essential Vitamin D. Farmers and feeders have many questions about Vitamin D fortification. The advertisement illustrated here (one of a series) shows how Dr. G. C. Wallis, recognized authority on Vitamin D nutrition, answers such questions through FIDY advertising in leading magazines.

It's all part of the educational FIDY program to emphasize that today's added stress factors have changed livestock nutrition requirements. More than ever, farmers must be sure that lack of a dependable Vitamin D source is not a limiting factor in their feed.

Be sure to fortify your feeds with FIDY—Fleischmann's Irradiated Dry Yeast. Here is a rich source of Vitamin D_3 that is dependable—and is economical, easy to use, and truly outstanding in dispersion qualities.

And, if your feeders have questions about Vitamin D nutrition, just have them address—

Dr. G. C. Wallis
Director of Nutrition,
Agricultural Department
Standard Brands Incorporated
625 Madison Avenue
New York 22, N. Y.

Free technical data, educational and sales aids are also available from the Agricultural Dept. upon request. Write for request form, showing available materials.

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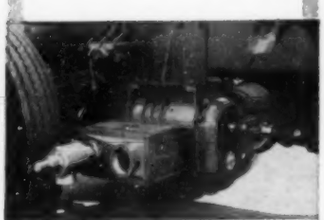
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On bulk-feed delivery trucks or on-the-farm processing units, Sutorbilt Series 88 positive pressure blowers provide constant velocities for pneumatically conveying all types of dry feedstuffs... at tons-in-minutes speeds... up the steepest inclines, even vertically.
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DETERMINATION OF PEPSIN
In Feed Mixtures

"The use of pepsin in animal feeds makes it desirable to estimate the pepsin activity of such feeds. In the absence of suitable published methods, an existing method was modified to suit the purpose."

By Howard J. Anderson and Donald M. Findlay
The Cudahy Laboratories
Omaha, Neb.

Pepsin, an extract of the linings of the stomachs of hogs slaughtered in packing plants, has long been used in medicine and industry. It is a component of many pharmaceutical preparations and finds other commercial uses such as in the preparation of protein hydrolysates, clarification of beer and production of pepsin chewing gum. A feed grade pepsin (The Cudahy Laboratories, Omaha) was developed for use in baby pig prestarter and starter feeds. Research using pepsin in pig feeding was reported in 1955 by Lewis et al. (3) and in 1957 by Catron, Baker and Hartman (2).

The National Formulary XI(4) specified that pepsin be standardized so that one part of pepsin will digest not less than 3,000 parts nor more than 3,500 parts of coagulated egg white (albumin) under defined conditions by comparing to a National Formulary Reference pepsin powder. This is termed, "Pepsin, N.F." In the presence of the many constituents of feeds, it is difficult to estimate the degree of egg white digestion on which the N.F. method is based. Thus, there is a need for a method of pepsin assay in such complicated mixtures as feed formulas. The method would have use in checking production processes in the manufacture of feeds containing pepsin and for the purchaser in checking pepsin activity of commercial pig feeds.

A modification of the pepsin assay method (Anderson, et al.; 1), which gave values directly proportional to those given by the N.F. method, is well suited to this use and is here described.

METHOD:

Reagents and Sample Preparation —Pepsin Diluent — Prepare in advance using 0.1 ml. of tenth normal hydrochloric acid per liter of distilled water.

Reference Pepsin Solution — The test is done either in a 30° C. water bath or in a room temperature water bath, preferably at room temperature between 20 and 30° C. For tests to be run at or near 30° C. in a water bath, make 0.176 gm. of National Formula XI pepsin standard (obtainable from The Committee on the National Formulary, American Pharmaceutical Assn., 2215 Constitution Ave., N.W., Washington 7, D.C.) up to 1,000 ml. with the pepsin diluent. This is equivalent to 1 gm. of 1:3000 pepsin per 5 liters. For tests to be run at 20 to 27° C., make 0.2933 gm. of National Formulary XI pepsin standard up to 1,000 ml. with pepsin diluent. This is equivalent to 1 gm. of 1:3000 pepsin per 3 liters. This stronger standard pepsin solution is used to counterbalance the slower rate of curdling characteristic at the lower temperatures. Keep the portion to be used immediately at room temperature and maintain under refrigeration for possible use within the next few days.

Raw Sample Suspension—Fifty gm. of the feed are blended in a Waring Blender at "high" speed for 60 sec., with 300 ml. of distilled water, to which 2 ml. of concentrated hydrochloric acid has previously been added. Make this up to total volume of 375 ml. with distilled water. Read pH, which should be between 3.0 and 4.0. If the foam formed during blending interferes with the volume measurement, it may be desirable to first determine the amount of diluent which will yield 375 ml. of suspension and use that amount—343 ml. in a typical feed. If the final raw sample suspension pH is not between 3.0 and 4.0, the sample is discarded and another one run using less or more acid to obtain pH figures in the desired range. Acidification after spinning has given unsatisfactory results.

Boiled Sample Suspension — Place 20 ml. of the sample suspension in a large test tube and heat in a boiling water bath for 10 minutes to destroy the pepsin. Readjust the boiled sample suspension to the pH of the test sample, using a glass electrode or outside indicator, if the pH changes during boiling.

Milk—Decant the cream from non-homogenized fresh milk — complete separation is not necessary. (Bottled skim milk has given inconsistent results because of variable bacterial content.) To the residue from 1 qt., add sufficient acid to get a setting time in the milk tubes, containing standard pepsin solution, of between 250 and 800 seconds. This amount of acid varies with the milk, but is ordinarily around 10 ml. of normal hydrochloric acid. Mix milk and acid well and filter through coarse paper or cotton. Place a series of large test tubes (about 21 mm. in diameter) in a rack in a water bath. Pipet 25-ml. portions of acidulated milk into each tube and allow to come to the bath temperature.

Curdling Test—Add pepsin diluent, solution of reference pepsin, boiled sample suspension and raw sample suspension to the tubes in the pattern described below and in the order shown for each tube. When the reference pepsin solution or the raw sample suspension is added and mixed, record zero time for each tube to the nearest second. All added liquids should be at the same temperature as the bath. As the suspensions are coarse, use a wide tip pipet. Use the same pipet for sample and standard to avoid errors introduced by the coarse tip; rinse with each solution before measuring. Replicates are run as checks.

ADDITIONS, ML.

	Tube 1 Control	Tube 2 Sample
Pepsin diluent	0	1.0
Boiled sample suspension	1.0	0
Reference Pepsin solution	1.0	0
Raw sample suspension	0	1.0

Partially invert the tubes against the palm of the hand from time to time so as to note the curdling time. When not disturbed, these tubes set up to a rennet-like mass. However, to determine the end point more sharply, examine the milk for curdling in the thin streams flowing back after partially inverting the tube.

TABLE 1. Assay Results—Pepsin in Feeds

Product	—Assay: Pounds— pepsin/ton feed Meal	Pellets	—pH— Meal	Pellets	Per cent Demonstrated¶
BRAND A					
Baby Pig Prestarter:					
5 lb. pepsin 1:3000 added/ton feed*	4.7	3.1	6.3	6.4	94% meal 62% pellets
BRAND B					
Baby Pig Prestarter:					
5 lb. pepsin 1:3000 added/ton feed†					
Mix No. 1	..	4.0	..	5.8	80%
Mix No. 2	..	3.9	..	6.1	78%
Mix No. 3	..	4.2	..	6.1	84%
BRAND C					
Baby Pig Prestarter:					
5 lb. pepsin 1:3000 added/ton feed‡					
Mix No. 1	4.2	..	6.1	..	84%
Mix No. 2	4.2	..	6.1	..	84%
Mix No. 3	4.4	..	6.1	..	88%
Mix No. 4	4.2	4.1	6.0	5.85	84% meal 82% pellets
BRAND D					
Baby Pig Prestarter:					
5 lb. pepsin 1:3000 added/ton feed‡	4.8	3.8	6.4	6.5	96% meal 76% pellets
BRAND E					
Hog Ration (Meal):					
6 lb. pepsin 1:3000 added per ton	5.1	..	..	..	85
4 lb. pepsin 1:3000 added per ton	3.8	..	..	..	95
2 lb. pepsin 1:3000 added per ton	1.6	..	..	..	80
1 lb. pepsin 1:3000 added per ton	0.76	..	..	..	76
Iowa Prestarter No. 75 Meal:					
2.5 lb. pepsin 1:3000/ton feed	1.9	..	6.4	..	76
5.0 lb. pepsin 1:3000/ton feed	4.0	..	6.4	..	80
6.7 lb. pepsin 1:3000/ton feed	5.7	..	6.4	..	85.1
10.0 lb. pepsin 1:3000/ton feed	8.5	..	6.4	..	85

*A second assay one and one-half months later showed 4.5 lb. 1:3000 pepsin per ton feed.
†Pelleted with steam. Temperature of pellets out of conditioner was 131° F. and temperature through die was 156° F.
‡Results are average of three assays on each sample.
¶Differences between per cents in this column and 100% are due to (1) losses in potency caused by mixing and pelleting, (2) failure of the assay method to show the total potency, (3) non-representative sample because of incomplete mixing, or (4) a combination of these factors.

With practice, this end point can be consistently recognized. Compare the intervals in seconds by using the following formulas:

CALCULATION

30° C. bath—when 50 gm. of sample are diluted to 375 ml. total or a dilution of 1 to 7.5 and using 0.176 gm. N.F. standard pepsin per liter, equivalent to 0.200 gm. of 1:3000 pepsin per 1,000 ml. or 1 gm. to 5,000 ml.

$$\frac{\text{Time of control setting}}{\text{Time of sample setting}} \times \frac{7.5 \times 2{,}000}{5{,}000} = \text{lb. of 1:3000 pepsin per ton of feed}$$

(This calculation is used when the feed contains approximately 3 lb. of 1:3000 pepsin per ton of feed.) For other strengths different dilutions would be used. When 5 lb. of pepsin is used per ton, 50 gm. is diluted to 625 ml. and appropriate changes made in the calculation.

20° C.-27° C. bath—when 50 gm. of sample are diluted to 375 ml. total and using 0.2933 gm. of N.F. reference pepsin per liter which corresponds to 0.33 gm. of N.F. reference per liter or 1 part in 3,000.

$$\frac{\text{Time of control setting}}{\text{Time of sample setting}} \times \frac{7.5 \times 2{,}000}{3{,}000} = \text{lb. of 1:3000 pepsin per ton of feed}$$

(This calculation is used when the feed contains approximately 3 lb. of 1:3000 pepsin per ton of feed.)

If the milk does not set in a time close to that of the standard tubes, prepare a stronger or weaker sample suspension, and repeat the assay. For example, if the standard sets in 600 seconds, a sample setting between 400 and 900 seconds is satisfactory.

Discussion—The method has been applied successfully to various kinds of feed preparations containing pepsin—i.e. meals and pellets. Many assays have been run, and examples are shown in Table 1.

The last column shows the per cent of added pepsin which was demonstrable in the mixed feed. In addition to any possible failure of the method to show the total amount of added pepsin, certain mixing conditions cause partial or even complete loss of pepsin-activity. One of these is neutralization of the acidity of the commercial pepsin.

It is often instructive to determine the pH of any feed mixture which contains pepsin. Two gm. of the feed in 100 ml. of distilled water is a convenient dilution. If the pH is 6.5 or a greater number, the pepsin activity is likely to have been largely destroyed. If the pH is 6.0 or a lesser number the pepsin activity may well be preserved. Even if the pH of a solution of mixed feed is favorable to pepsin survival the presence of alkaline ingredients may cause local pepsin destruction. High moisture content and excessive heating during pelleting are other factors which contribute to destruction of the pepsin.

ACKNOWLEDGEMENTS

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LITERATURE CITED

(1) Anderson, H. J., Findlay, D. M., Targy, Margaret, Wiesman, H. H., and Wheeler, F. W.—Drug Standards, 19, 135 (1951).
(2) Catron, D. V., Baker, R. O., and Hartman, P. A.—Proceedings of the Ninth Research Conference, American Meat Institute, University of Chicago, March, 1957.
(3) Lewis, C. J., Catron, D. V., Liu, E. H., Speer, V. C., and Ashton, G. C.—J. Agr. Food Chem., 3, 1047 (1955).
(4) National Formulary, 11th, p. 268—J. B. Lippincott and Co., Philadelphia, Pa., 1960.

KimberChik Hatcheries Buys A. E. Staley Farm

DECATUR, ILL.—Standard (KimberChik) Hatcheries of Decatur has purchased the A. E. Staley Manufacturing Co. research farm, Ralph M. Colburn, Standard Hatcheries, announced. Mr. Colburn is a partner in Standard with Stanley Taylor.

The 160 acre farm, located six miles north of Decatur at Forsyth, will be used for raising 16 to 20 week old Kimber pullets and producing Kimber hatching eggs. The hatchery operation will remain at its present location in Decatur.

Mr. Colburn said that the "rapidly expanding KimberChik program, both for day old chicks and started pullets, has prompted the expansion."

The A. E. Staley Co. operated the research farm until about a year ago when Staley sold its formula feed business to Nutrena Mills, Inc.

NEW KANSAS ASSOCIATION DIRECTORS—Newly elected members of the board of directors of the Kansas Grain & Feed Dealers Assn. were joined for this photograph by one of the oldest (in point of service) directors. From left to right are Alliff Neal, Windom Grain Co., Windom; Earl Bryan, Parker Grain Co., Hugoton; J. H. Voss, Voss Grain & Seed Co., Inc., Downs; and Paul Stutterheim, Reich Grain Co., Inc., Norton. Mr. Voss, the old-timer, has served as a director for nearly 30 years. He was president in 1929 and 1930, and claims to have missed only two of the association's conventions in 41 years.

MR. FEED MANUFACTURER:
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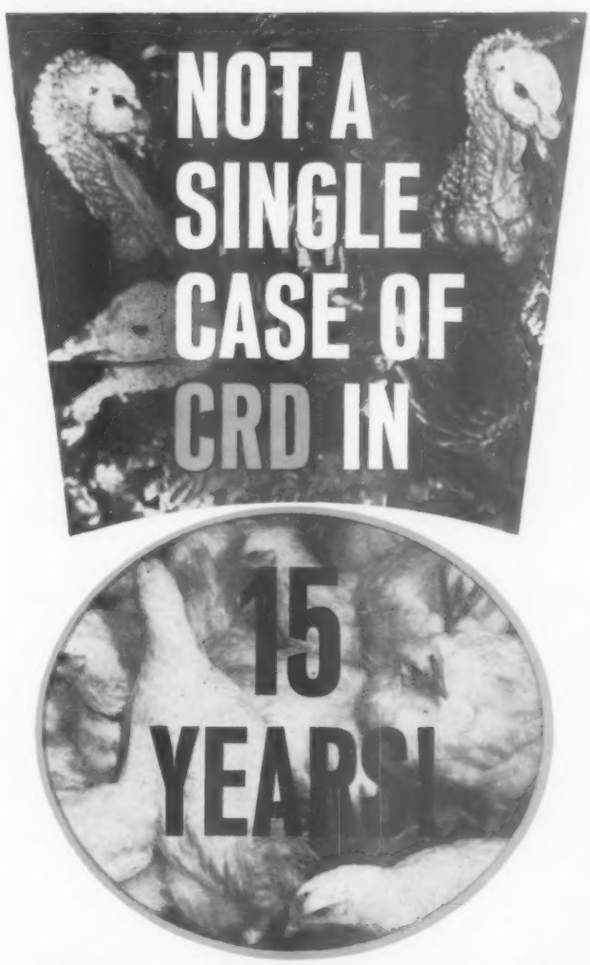

Success due to good farm management plus rations supplemented with Peebles' M-N-C

CRD (chronic respiratory disease) is the poultry affliction that many authorities state is by far the most frequent disease cause of poultry condemnations and is responsible for the loss of hundreds of thousands of dollars in poultry profits annually.

But in the 15 years the experimental farm of Western Condensing Company has been raising poultry, not a single case of CRD has occurred! And they have raised thousands upon thousands of broilers, layers and turkeys!

This amazing record results from two factors: The use of Peebles' M-N-C in all poultry rations plus good management.

M-N-C consists of appetizing milk nutrients that keep birds on full feed constantly, even during stress. And it is stress that leads to most cases of CRD.

Good management, too, is exceptionally important in CRD prevention. Crowding, poor ventilation, unsanitary conditions and other inadvisable practices pave the way for stress and CRD.

NOW! Build low-cost CRD protection into all your poultry feeds with Peebles' M-N-C

It's true! Now you can offer poultrymen CRD protection right in with their regular rations by adding M-N-C to your poultry feeds!

Unlike ordinary dried whole whey, M-N-C contains a high concentration of delactosed milk nutrients and whey factor. It develops bonus digestive organisms for more complete utilization of the feed components... keeps appetites sharp... builds strong, *natural* resistance to stress. *And research proves stress leads to the bulk of all cases of CRD.*

Compared to costly medications, M-N-C is an extremely low-cost way to combat stress and CRD. And birds never build immunity to healthful milk nutrients!

And remember this... the use of economical M-N-C in your feeds means you can offer poultry raisers protection against CRD at a price that won't cut into their razor-thin profit margins.

Add the strong sales plus of Peebles' M-N-C to all your poultry feeds. Write or phone us today for complete details and prices.

Western Condensing Company • Appleton, Wisconsin
World-Wide Supplier of Quality Milk Products
DIVISION OF FOREMOST DAIRIES, INC.

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BOARD OF TRADE BLDG., KANSAS CITY 5, MO.
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A Nationwide Service from the Heart of America

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NORTH AMERICAN TRADING & IMPORT CO., INC.
1429 WALNUT STREET • PHILADELPHIA 2, PA.

FEEDSTUFFS
LEADER IN THE FIELD

Elect 2 Vice Presidents At A. E. Staley Co. Annual Meeting

DECATUR, ILL.—Directors and officers of the A. E. Staley Manufacturing Co. were elected in annual meetings of the company's stockholders and board of directors.

L. E. Doxsie was elected vice president for the corn, grocery products and overseas divisions of the company, succeeding L. S. Roehm.

Dr. James A. Bralley was elected vice president of the research and development division, succeeding Dr. Thomas L. Gresham.

All other officers and directors of the Decatur corn, soybean and chemical processing concern were reelected, except Paul W. Atwood, who retired early this month as head of the UBS Chemical Co. division of Staley's.

A. E. Staley, Jr., chairman, reviewing the previous fiscal year and the first six months of the current fiscal

L. E. Doxsie Dr. James A. Bralley

year in the stockholders' meeting, said earnings in the current year have closely paralleled year-ago results, and though factors which contributed to a downturn in the third quarter last year continue to be felt, earnings have been maintained on a rather even plateau for the past nine months.

Corn and soybean processing operations remain highly competitive under the influence of import starches and overcapacity in the soybean industry, he said, but the nation's economy appears to be growing firmer.

Directors

Directors elected in the stockholders' meeting are: A. E. Staley, Jr., E. K. Scheiter, A. R. Staley, R. L. Rollins, D. E. Nordlund, W. R. Boyer, W. B. Bishop, T. B. Butler, president of Mercantile-Safe Deposit & Trust Co., Baltimore, Md; A. Q. Petersen, New Orleans industrialist, a director of several U.S. corporations, and former chairman of Wesson Oil & Snowdrift Co.; H. D. Wright, board chairman of Republic Coal & Coke Co., Chicago, and R. J. Murphey, partner in the Decatur accounting firm of Murphey, Turnbull & Jones.

Officers

Officers elected in the annual meeting of the board of directors are: A. E. Staley, Jr., chairman of the board; E. K. Scheiter, president; R. L. Rollins, vice president; D. E. Nordlund, vice president; L. E. Doxsie, vice president; Dr. J. A. Bralley, vice president; W. R. Boyer, treasurer and assistant secretary; R. F. Daily, secretary; C. V. Glynn, comptroller; H. M. Staley, assistant treasurer, and C. W. Schultz, Jr., K. J. Maltas, J. W. Moore, and E. C. Lane, assistant secretaries.

The Staley board declared a regular quarterly dividend of 25¢ per share of common stock. Payments will be made June 6 to stockholders of record May 19. The usual dividend of 94¢ was also voted on the $3.75 preference stock. It will be paid June 20 to stockholders of record June 6.

DON'T LET THIS HAPPEN TO YOU!

MISBRANDED
VITAMIN
FEEDS
100 LBS. NET
NOTICE OF JUDGMENT UNDER SECTION 705 OF THE FEDERAL FOOD, DRUG, AND COSMETIC ACT
Approved for VITAMIN D upon periodic tests

Fortify your products with
MINERAL STABLE BO-DEE

Protects the Vitamin D potency of your products so that the label statement and the actual D content are the same.

Regular periodic tests under actual conditions of use and mineral exposure are conducted by the Wisconsin Alumni Research Foundation. BO-DEE Mineral Stable D2 and D3 are the only Vitamin D Products which meet the exacting requirements established for the use of the W.A.R.F. Seal of Approval.

BO-DEE Mineral Stable Vitamin D products are manufactured only by

N.V. PHILIPS-DUPHAR, the Netherlands
The World's Largest Manufacturer of Vitamin D

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YEAST
Hickory Smoked Yeast
Primary (Torulopsis utilis)
Powders—Flakes—Extracts—Concentrates—Hydrolysates
Vitab
B-Complex Extract
Brewers' (Saccharomyces cerevisiae)

PURE VEGETABLE EXTRACT COLORS
Yellow—Red Orange

ENZYMES
T.S. 3 for Greasetrap and Septic Tanks

ALGIT
Norwegian Kelp Meal

Bakers' Specialties
Digestive Pharmaceuticals
Chlorophyll
Phytol
Carotene
Xanthophyll
Anti-Oxidant (BHT)
Hydropoid

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BOWMAN FEED PRODUCTS, INC., Holland, Michigan
13160 Ortley Place, Van Nuys, California
600 South Michigan, Chicago 5, Illinois

CHARLES BOWMAN & CO.
220 East 42nd St., New York 17, N. Y.

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BROOKS' SOCKET

Anyone can install this cable socket. Just push cable into socket, screw down locks as shown. Nothing more. Smooth, no nuts, bolts or wires protruding. The James W. Weldon laboratory test shows breaking pull well in excess of 7,000 lb. on 3/8" cable with no slip in socket.

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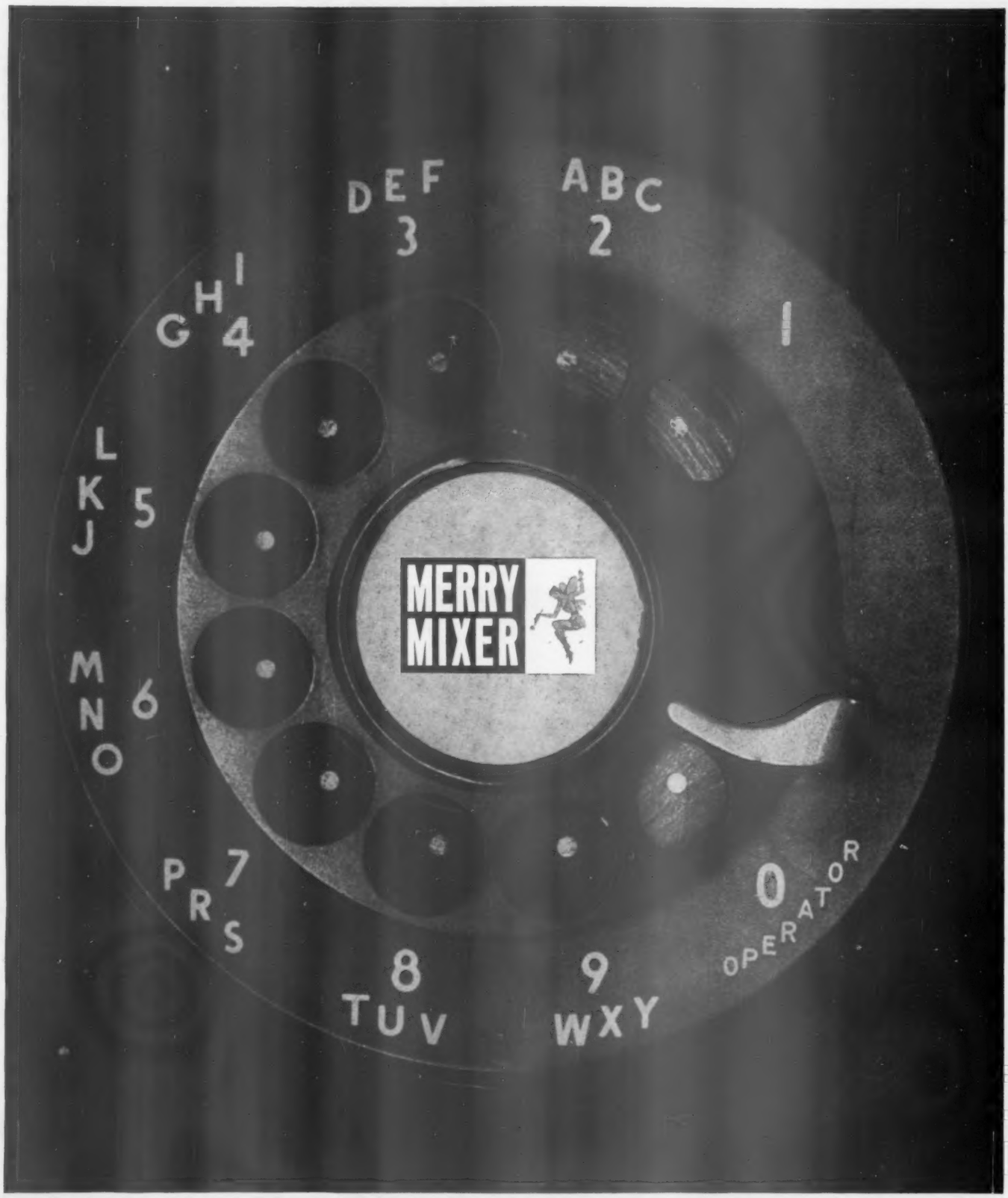
Give HEART FUND ®



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We believe that quality in service goes hand in hand with quality in product. Just as we take great precaution to see that Merry Mixer Greenules are the finest you can buy, we want our service to be the finest you can get. We'll have your order where you want it — when you want it. And, we play it by the numbers 'til we know you have it.

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Nebraska City, Nebraska, *Phone 184* ■ Guntersville, Alabama, *Phone Justice 2-3156*

Convention Calendar

New Listings

For the convenience of readers who scan the Convention Calendar regularly for new listings, those added to the column in the current week appear separately from ones which have been entered previously. The following week they will be moved to their proper slot where they will remain until the event is held.

June 13—Ohio Beef Cattle Day; Animal Science Bldg., West Campus, Ohio State University, Columbus.

Aug. 18 — Ohio Swine Day; Ohio State University, Columbus.

Sept. 20-21—American Feed Manufacturers Assn. Marketing Seminar; Morrison Hotel, Chicago, Ill.; sec., W. T. Diamond, 53 W. Jackson Blvd., Chicago.

Sept. 22-23 — Iowa Feed Conference; Memorial Union, Iowa State University, Ames; chm., Dr. C. E. Summers, Animal Husbandry Dept.

Nov. 16-19—Florida Nutrition Conference; Grand Bahama Hotel, West End, Grand Bahama Island; chm., Dr. J. P. Feaster, Animal Husbandry and Nutrition Dept., University of Florida, Gainesville.

1962

Feb. 26-March 1 — Colorado Livestock Days; Colorado State University, Fort Collins; chm., Dr. C. D. Story, head, Animal Science Dept.

April 26-28—California Hay, Grain & Feed Dealers Assn.; Biltmore Hotel, Los Angeles, Cal.; sec., Leo L. Johnson, 1400 10th St., Sacramento 14, Cal.

April 26-28—Kansas Grain & Feed Dealers Assn.; Broadview Hotel, Wichita, Kansas; sec., Orris E. Case, 609 Wiley Bldg., Hutchinson, Kansas.

May 10-12—American Feed Manufacturers Assn.; Conrad Hilton Hotel, Chicago, Ill.; sec., W. T. Diamond, 53 W. Jackson Blvd., Chicago 54.

May 22—Des Moines Feed Club Field Day; Des Moines Golf and Country Club, Des Moines, Iowa; (hotel reservations) Reed Merrick, Sargent Calcium Co., 2525 Euclid Ave.; (tickets for banquet and show) Don Frantz, Nixon and Co., S.E. 21st and Maury.

May 22-23—Poultry Industry Sales Clinic; Continuing Education Center, University of Georgia, Athens; sec., Southeastern Poultry & Egg Assn., Harold E. Ford. 235 E. Ponce de Leon Ave., Decatur, Ga.

May 26—Oregon Beef Cattle Day; Oregon State University, Corvallis; chm., Dr. A. T. Ralston, Animal Husbandry Dept.

May 31—Iowa Cattle Feeders Day; Iowa State University, Ames; Dr. Wise Burroughs, Animal Husbandry Dept.

June 1-2 — Arizona Ranch School and Cattle Feeders Day; University of Arizona, Tucson; Dr. Bruce R. Taylor, head, Animal Science Dept.

June 4-6—Indiana Grain & Feed Dealers Assn.; French Lick-Sheraton Hotel, French Lick, Ind.; sec., Fred K. Sale, 600 Board of Trade Building, Indianapolis 4.

June 5-6 — Central Retail Feed Assn.; Hotel Schroeder, Milwaukee, Wis.; sec., Eldon Roesler, 1712 W. St. Paul Ave., Milwaukee.

June 5-7—Association of Southern Feed, Fertilizer and Pesticide Control Officials; Lafayette Hotel, Lexington, Ky.; sec., M. B. Rowe, 203 N. Governor St., Room 304, Richmond 19, Va.

June 8-11—Canadian Feed Manufacturers Assn.; National Convention; Manoir Richelieu, Murray Bay, Quebec; national secretary, W. N. Hendrick, 2901 Bloor St. W., Toronto 18, Ont.; for registrations, T. G. Sevigny, Room 100, 355 McGill St., Montreal 1, Quebec.

June 9-10—Arkansas Poultry Festival: Little Rock; mgr., Arkansas Poultry Federation, John Haid, P.O. Box 1446, Little Rock.

June 11-14—American Dairy Science Assn.; University of Wisconsin, Madison; chm., Dr. L. H. Schultz, dairy husbandman, University of Wisconsin.

June 12-13—Eastern Federation of Feed Merchants; Concord Hotel, Lake Kiamesha, N.Y.; sec., Austin W. Carpenter, Box 66, Sherburne, N.Y.

June 13-16—Northeastern Poultry Producers Council Egg Quality School; Pennsylvania State University, University Park, Pa.; sec., Richard I. Ammon, 10 Rutgers Place, Trenton 8, N.J.

June 15-16—Pacific Northwest Grain Dealers Assn.; Davenport Hotel, Spokane, Wash.; sec., Merrill Sather, 418 Peyton Bldg., Spokane 1.

June 15-17 — Delmarva Chicken Festival; Seaford, Del.; Delmarva Poultry Industry, Inc., R.F.D. No. 2, Box 47, Georgetown, Del.

June 19—Connecticut Poultry Day Program and Exhibit; University of Connecticut; William A. Aho, extension poultryman.

June 19-21—American Association of Feed Microscopists Annual Meeting; Continental Denver Motor Lodge, Valley Highway and Speer Blvd., Denver, Colo.; sec., G. M. Barnhart, Missouri State Department of Agriculture, Jefferson City, Mo.

June 19-24—Feed Microscopy Short Course, sponsored by American Association of Feed Microscopists; Continental Denver Motor Lodge, Valley Highway and Speer Blvd., Denver, Colo.; sec., G. M. Barnhart, Missouri State Department of Agriculture, Jefferson City, Mo.

June 20-21—Alabama Poultry Industry Assn.; Whitley Hotel, Montgomery, Ala.; sec., W. L. Walsh, Box 567, Montgomery.

June 28 and 30—"Golden Goodness of Texas High Quality Eggs" Month; June 28, Kickoff Luncheon, Texas State Hotel, Houston; June 30, Kickoff Luncheon, Baker Hotel, Dallas; T. A. Hensarling, sec., Texas Egg Coun-

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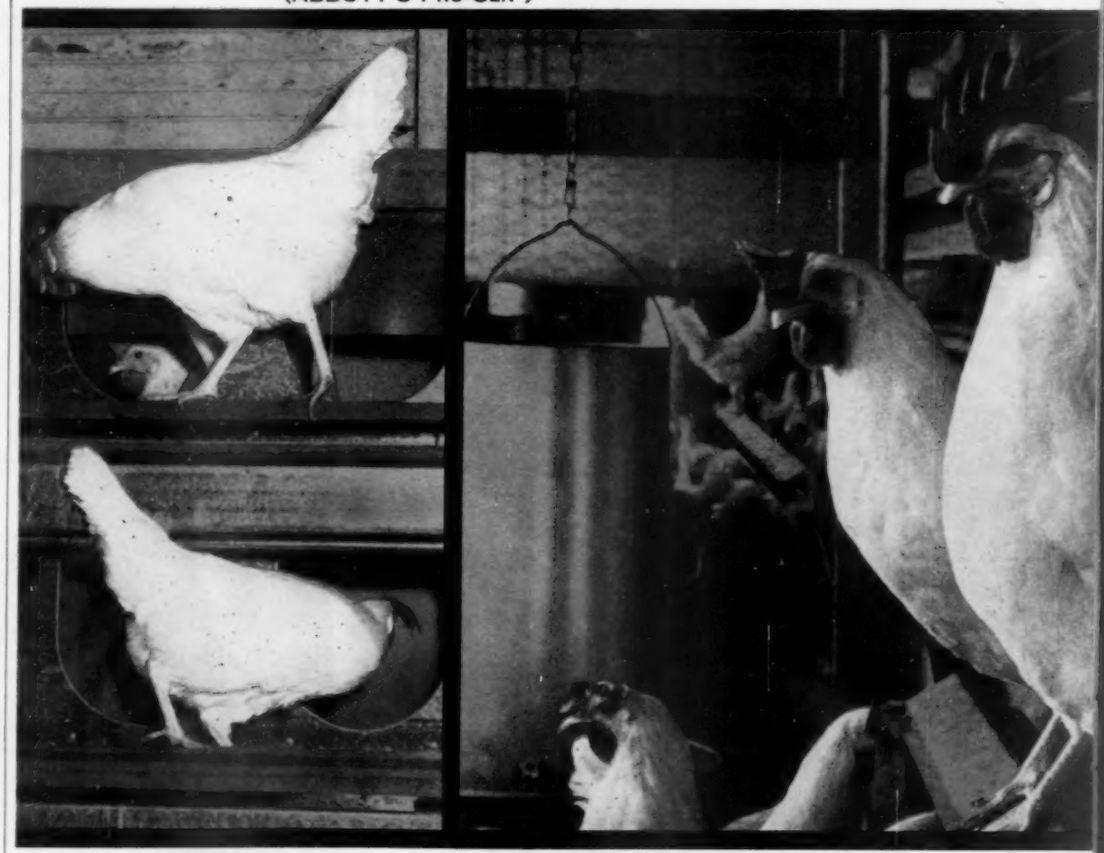
(ABBOTT'S PRO-GEN®)



In test after test, Arsanilic Acid performs best under practical conditions!

When good feeds, top management and first-rate housing combine to keep hens healthy, laying percentages are almost sure to be satisfactory. But these three basic factors of good poultry raising cost money—extra money. They represent ideals . . . always desirable but not always attainable.

Arsanilic Acid Works Best When It's Needed Most. Most egg producers take a practical viewpoint. They know they can't operate like a research farm. Yet, production is the lifeline of their business . . . so, they turn to Arsanilic Acid to help keep hens healthy—keep production up.

Almost every hen is host to disease germs. Under practical conditions—during stress—hens may lack the vitality to fight off infection. That's where Arsanilic Acid comes in . . . and the tougher the battle, the harder Arsanilic Acid fights. It opposes harmful bacteria in the intestinal tract—helps protect against active disease—helps prevent laying slumps.

cil, P.O. Box 251, Stephenville, Texas.

June 29-30—Pennsylvania Poultry Federation; Pennsylvania State University, University Park; (room reservations) Russell Murphy; (program information) Glen O. Bressler, Room 105, Weaver Hall.

July 7-8—Maine Broiler Festival; Belfast, Maine.

July 14-18—Georgia Feed Assn.; Grand Bahama Club, Grand Bahama Island; sec., W. E. Merritt, Suite 1-A, 361 E. Paces Ferry Rd. N.E., Atlanta 5.

July 18-20—American Poultry Congress & Exposition; Municipal Auditorium, Minneapolis; Don M. Turnbull, sec., American Poultry & Hatchery Federation, 521 E. 63rd St., Kansas City 10, Mo.

July 24-28—Southeastern Egg Quality and Grading School; Auburn University, Auburn, Ala.; sec., Southeastern Poultry & Egg Assn., Harold E. Ford, 235 E. Ponce de Leon Ave., Decatur, Ga.

July 27—Technical Alfalfa Conference; co-sponsored by the American Dehydrators Assn. and USDA Western Utilization Research and Development Division; Western Regional Research Laboratory, USDA, Albany, Cal.; chm., Dr. G. O. Kohler, Chief, Division Field Crops Laboratory, Western Regional Research Laboratory, 800 Buchanan St., Albany 10.

Aug. 2-4—West Virginia Poultry Assn. Convention and Festival; Moorefield, W.Va., sec., Wilson Smith, Petersburg.

Aug. 3-4—National Soybean Processors Assn.; Edgewater Beach Hotel, Chicago, Ill.; sec., Wm. K. Self, 3818 Board of Trade Bldg., Chicago 4, Ill.

Aug. 7-9—Southeastern Management Roundtable; Continuing Education Center, University of Georgia, Athens; sec., Southeastern Poultry & Egg Assn., Harold E. Ford, 235 E. Ponce de Leon Ave., Decatur, Ga.

Aug. 7-12—Texas Feed Microscopy Short Course; Memorial Student Center, Texas A&M College, College Station; E. E. Brown, Station Microscopist.

CALENDAR FOR 1961-62

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Aug. 8-9—Wisconsin Nutrition School; Memorial Union, University of Wisconsin, Madison; Dr. Robert Grummer, Animal Husbandry Dept.

Aug. 9—Science at Work, Open House and Reports by Staff Scientists; Connecticut Experiment Station, Lockwood Farm, Mt. Carmel, Conn.

Aug. 13-18—School of Executive Development in Business Management, Unit II; Continuing Education Center, University of Georgia, Athens; sec., Southeastern Poultry & Egg Assn., Harold E. Ford, 235 E. Ponce de Leon Ave., Decatur, Ga.

Aug. 20-21—National Hay Assn.; Phoenix Hotel, Lexington, Ky.; sec., Mrs. Elgene L. Hicks, 900 E. Bridge St., Plainwell, Mich.

Aug. 21-22—Kentucky Feed & Grain Association; Brown-Suburban Hotel, Louisville, Ky.; sec., Jack Weber, Box 425, Lexington.

Aug. 24-26—North Carolina Feed Manufacturers Assn.; Cavalier Hotel, Virginia Beach, Va.; sec., McNair Evans, Box 428, Laurinburg, N.C.

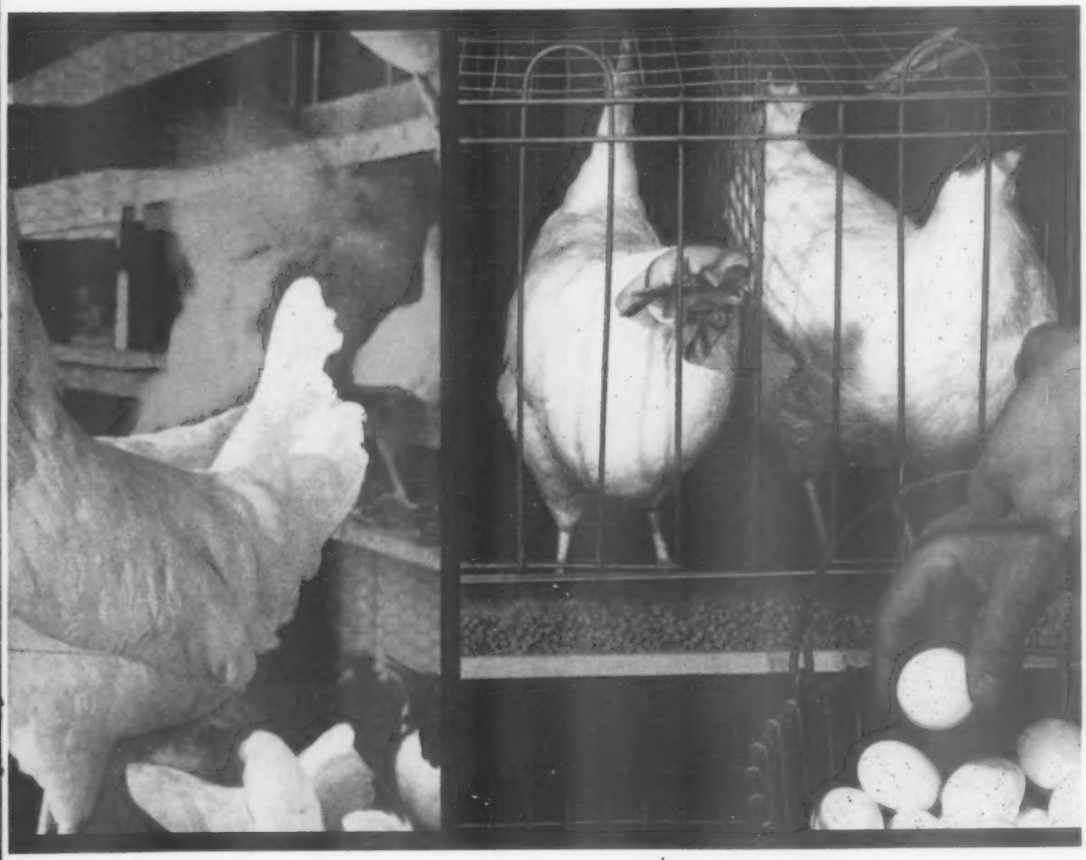
Aug. 24-27—Georgia Poultry Institute; Rock Eagle 4-H Club Center, Eatonton, Ga.; Dewey McNiece, Extension Poultry Dept., University of Georgia, Athens.

Aug. 28-29—American Soybean Assn.; Claypool Hotel, Indianapolis, Ind.; Geo. M. Strayer, Hudson, Iowa.

Sept. 11-12—Minnesota Nutrition Conference; Institute of Agriculture, University of Minnesota, St. Paul; chm., Dr. L. E. Hanson, Animal Husbandry Dept.

Sept. 11-13—Feed Production

in so many 1961 layer feeds!



Low Cost—Big Returns. Arsanilic Acid is the low-cost production builder that helps hens fill more egg baskets any time of year. It costs only a couple of pennies per hen per year—costs so little your customers can't afford to be without it. In a 12-month feeding trial in Michigan, a good ration plus Arsanilic Acid produced 15.7% more eggs. Yet, an increase of only two eggs a day per 1,000 hens paid for the Arsanilic Acid.

Useful In All Types Of Feeds. Every year, more egg producers are asking for low-cost Arsanilic Acid in all their poultry feeds. Not because they're trying to replace good feeds, good management and good facilities with medication, but because they know that, under practical conditions, Arsanilic Acid-fed hens stay healthier and lay better.

Available In Two Convenient Forms. Arsanilic Acid is available in pure form or in premix form (one pound of premix is enough for one ton of complete feed). It's manufactured by Abbott and sold under the trade name PRO-GEN®. Ask your Abbott man for details, or call Abbott Laboratories, Chemical Marketing Division, North Chicago, Illinois. 101585

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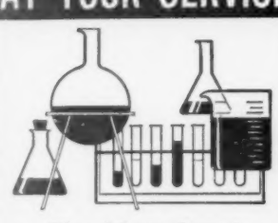

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School; Continental Hotel, Kansas City; sponsored by Feed Production School, Inc.; pres., Lloyd Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Sept. 13-14—Maryland Feed Service Conference; Chemistry Auditorium, University of Maryland, College Park; Wade H. Rice, Poultry Dept.

Sept. 14—Small Mill Workshop; Continental Hotel, Kansas City, Mo.; sponsored by Feed Production School, Inc.; pres., Lloyd Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Sept. 18-19—Pet Food Institute; Drake Hotel, Chicago, Ill.; sec., Clyde Kassens, 333 N. Michigan Ave., Chicago 1.

Sept. 19-21—Marketing Seminar for Feed Manufacturers; Morrison Hotel, Chicago; Sales Executives Council, American Feed Manufacturers Assn.; W. E. Glennon, president, 53 W. Jackson Blvd., Chicago.

Sept. 19-27—International Conference on Fish in Nutrition; Washington, D.C.; sec., Dr. Erik Heen, Chief, Fisheries Technology Branch, Food and Agriculture Organization, Washington 25.

Sept. 22-23—Iowa Feed Conference; Memorial Union, Iowa State University, Ames; Dr. H. L. Self, Animal Husbandry Dept.

Sept. 24-26—Southeastern Feed Production School; Continuing Education Center, University of Georgia, Athens.; sec., Southeastern Poultry & Egg Assn., Harold E. Ford, 235 Ponce de Leon Ave., Decatur, Ga.

Sept. 27-29—National Feed Ingredients Assn.; Lake Lawn Lodge, Delavan, Wis.; sec., I. Levin, 517½ E. Locust St., Des Moines 9, Iowa.

Sept. 27-29—Pennsylvania Millers & Feed Dealers Assn.; Hotel Hershey, Hershey, Pa., sec., D. W. Parke, P.O. Box 329, Ephrata, Pa.

Sept. 28-29—Arkansas Formula Feed Conference; University of Arkansas, Fayetteville; Dr. E. L. Stephenson, animal industry and veterinary science department.

Oct. 2-3—Washington Poultrymen's Institute; Centralia Junior College; Dr. Leo Jensen, Poultry Science Dept., Washington State University, Pullman.

Oct. 3-5—Northeastern Poultry Producers Council Exposition and Convention; Farm Show Bldg., Harrisburg, Pa.; sec., Richard I. Ammon, 10 Rutgers Place, Trenton 8, N.J.

Oct. 4-6—Texas Nutrition Conference; Texas A&M College, College Station; chm., Dr. J. R. Couch, Poultry Science Dept.

Oct. 10-11—Iowa Poultry Convention; Veteran Memorial Auditorium, Des Moines; sec., Iowa Poultry Assn., LeRoy Kruskop, 535 E. Lincoln Way, Ames, Iowa.

Oct. 15-20—School of Executive Development in Business Management, Unit III; Continuing Education Center, University of Georgia, Athens; sec., Southeastern Poultry & Egg Assn., Harold E. Ford, 235 Ponce de Leon Ave., Decatur, Ga.

Oct. 16-17—California Animal Industry Conference; Fresno Memorial Auditorium, Fresno, Cal.; co-sponsored by California Hay, Grain & Feed Dealers Assn. and University of California; sec., California Hay, Grain & Feed Dealers Assn., Leo L. Johnson, Blue Anchor Bldg., 1400 10th St., Sacramento, Cal.

Oct. 23-25—Centennial Nutrition Conference; Hotel Muehlebach, Kansas City 5, Mo.; sponsored by Midwest Feed Manufacturers Assn. and Land-Grant Colleges in Midwest's area; executive vice president, Lloyd S. Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Oct. 24-25—Virginia State Poultry Federation; Hotel John Marshall, Richmond, Va.; sec., J. Paul Williams, 615 E. Franklin St., Richmond 19.

Oct. 26-28—Association of American Feed Control Officials; Shoreham Hotel, Washington, D.C.; sec., Bruce Poundstone, Head, Feed and Fertilizer Control Dept., University of Kentucky, Lexington.

Nov. 1—Animal Nutrition Research Council; Shoreham Hotel, Washington, D.C.; sec., Dr. Philip Derse, Wisconsin Alumni Research Foundation, 506 Walnut St., Madison 5, Wis.

Nov. 1-2—Kansas Poultry Assn.; Broadview Hotel, Wichita; sec., Harry J. Reed, Box 663, Manhattan.

Nov. 1-3—Cornell Nutrition Conference; Statler Hilton Hotel, Buffalo, N.Y.; chm., Prof. Douglas E. Hogue, Animal Husbandry Dept., Wing Hall, Cornell University, Ithaca, N.Y.

Nov. 8-9—Illinois Feed Assn.-Illinois Poultry and Hatchery Federation joint convention; Springfield Armory, Springfield; sec. I.F.A., Dean M. Clark, 141 W. Jackson Blvd., Chicago 4; sec., I.P.H.F., Aubrey Harless, Shelbyville, Ill.

Dec. 6-7—Missouri Poultry and American Poultry & Hatchery Federation Midwest Quickie Convention; Hotel Continental, Kansas City, Mo.; sec., Missouri Poultry Improvement Assn., E. M. Funk, Box 568, Columbia, Mo.

Dec. 7-8—Michigan Feed and Grain Dealers Assn.; Pantland Hotel, Grand Rapids, Mich.; sec., Nevels Pearson, Box 472, East Lansing.

1962

Jan. 29-31—Southeastern Poultry & Egg Assn.; Municipal Auditorium, Atlanta, Ga.; sec., Harold E. Ford, 235 E. Ponce de Leon Ave., Decatur, Ga.

Feb. 4-6—Wyoming Grain, Feed & Seed Dealers Assn.; Townsend Hotel, Casper, Wyo.; sec., Everett L. Berry, Box 118, Sheridan, Wyo.

Feb. 5-7—Association of Southern Agricultural Workers; Jacksonville, Fla.

Feb. 9-11—Poultry Fact Finding Conference; sponsored by Institute of American Poultry Industries; Municipal Auditorium, Kansas City, Mo.; pres., Harold M. Williams, 67 E. Madison, Chicago 2, Ill.

Feb. 14-15—Pacific Northwest Feed Mill Production School; Benjamin Franklin Hotel, Seattle; sponsored by Washington State Feed Assn.; mgr., John G. Wilson, 814 Second Ave. Bldg., Seattle 4.

Feb. 16—Washington State Feed Assn. annual convention; Benjamin Franklin Hotel, Seattle; mgr., John G. Wilson, 814 Second Ave. Bldg., Seattle 4.

Feb. 20-21—Virginia State Feed Convention and Nutrition Conference; Hotel Roanoke, Roanoke, Va.; sec., Virginia State Feed Assn., J. Paul Williams, 615 E. Franklin St., Richmond 19, or Prof. Paul M. Reaves, Dairy Science Dept., Virginia Polytechnic Institute, Blacksburg.

NEW BULK FEED "SUPERMARKET"
Anchor Milling Company's Bulk Feed Supermarket at Tuscumbia, Mo., planned and erected by Marshall Construction Co., Marshall, Mo. Prepared Bulk Feed is stored in and delivered direct to trucks from five overhead Columbian Bulk Feed tanks. Supplements are stored for mixing in four Columbian tanks (behind overhead tanks). Feed is milled, mixed and pelleted in mill; automatically conveyed to Bulk Feed Tanks.
MASTER-CRAFTED BY
COLUMBIAN
SINCE 1903

"Busy at Capacity 10 Hours a Day" Says Anchor Milling Co. Manager

Simple Columbian Bulk Feed installation cuts costs and speeds feeding of 500 head of stock a year for Robinson Bros. Feedlot, Great Falls, Mont. Two 4400 bu. Columbian AAA grain bins and three 990 bu. Columbian Bulk Feed tanks are connected to single leg. Scale house measures and proportions feed. Planned and erected by Roger H. Dunlap, Great Falls, Montana.

"Do-it-Yourself" Feed mill cuts feed costs and feeding time with a 30 ton daily bulk feed capacity, at Lafayette, Colorado. Ground grains are fed through leg to four 22.8 Columbian bulk feed tanks. Slide gates in auger at bottom permit measuring and mixing feed grains. Planned and erected by Madron Mfg. Co., Denver, Colorado.

Bulk Feed trucks for turkey, chicken and hog raisers of the Tuscumbia, Mo. area are filled supermarket fashion in minutes from Anchor Milling Company's five 14½-ton Columbian Bulk Feed Tanks. They have their choice of a variety of feeds milled, mixed and pelleted right at the mill.

The new supermarket system of bulk feed preparation and delivery has proven so popular that the plant is operating at capacity 10 hours a day, according to Homer Wright, manager. Until Anchor Milling Co. put this modern, efficient installation into operation, feed had to be hauled nearly 100 miles and feed cost was high. Now a variety of pellet and crumbled feed is prepared from local grains and mixed with concentrates at the mill. The supplements are stored in four 8.2 ton Columbian side draw-off tanks and brought to the mixers and pelleting machines by auger conveyors. A series of augers elevates, conveys and distributes the feed to the overhead storage tanks. Tank intake gates are ground controlled.

Bulk trucks drive onto a 10′ x 50′ scale under the tanks. In a matter of minutes the selected feeds are accurately measured into the trucks by scale and ground-operated gate control. Loading capacity is about 4 tons per hour.

Anchor Milling Company's efficient Bulk Feed Supermarket is just one of many ways Columbian Bulk Feed tanks and equipment are increasing the efficiency and lowering the cost of feed marketing and livestock feeding. Whether you are a feeder, miller or feed dealer, Columbian can help you make more profit. Why not write today, outlining your requirements? Columbian engineers and Columbian-approved contractors in your area are ready to assist you.

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Use FEEDSTUFFS Want Ads for RESULTS

JAPANESE MILL—Shown here is a scale model of the new feed mill of Nihon Nosan Kogyo Co., Ltd., in Japan. Buhler Brothers Engineering Works, Uzwil, Switzerland, will install equipment in the 75-ton-per-hour facility, which the firm says will be the largest mill in Japan.

Plans for Japan's Largest Mill Told

YOKOHAMA, JAPAN—Construction is to begin this summer in Yokohama on a 75-ton-per-hour feed mill for Nihon Nosan Kogyo Co., Ltd.

The new mill will be the largest in Japan, the announcement said.

The new mill will be built at the harbor of Yokohama and will include an elevator for 8,000 tons of wheat and 1,800 tons of meal products as well as complete mixed feeds. Control of the batch-mixing units will be through an automatic punched card system.

Besides the new mill, Nihon Nosan Kogyo Co., Ltd., owns mills at Nagoya, Sakaide and Moji.

The new mill will be built by Buhler Bros. of Switzerland.

Retires to Start Anew

CHICO, CAL.—For many years Jack Vanella, a two year director of the California Hay, Grain & Feed Dealers Assn., has been a partner in the Butte Feed & Warehouse Co., in Chico. He has recently retired from this partnership, leaving Joe Brottan as the sole partner, who will continue the business at its same location.

Mr. Vanella has started a new enterprise which is called a "family business," under the name of Vanella Farm Store located at First and Orange in Chico. He will handle Albers feed along with fertilizer, chemicals, garden supplies and seeds. His oldest son Tom, now 22, will be working with him closely, followed by Bob, 15, and 9-year-old Darrell will eventually come along. The two girls will be bookkeepers, perhaps.

James Evans Elected

ATLANTA, GA.—James Evans of Georgia Broilers, Inc., Gainesville, has been elected president of the Georgia Poultry Processors Assn., succeeding Joe Hatfield.

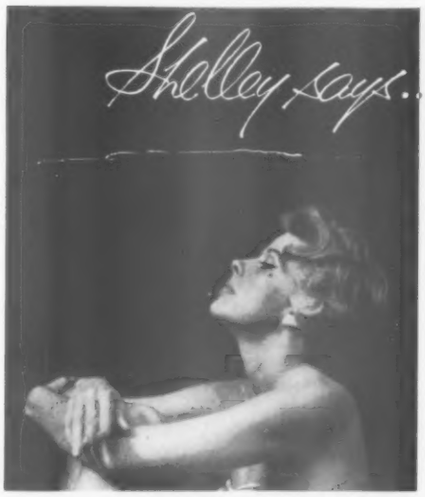
Bill Pulliam of Gold Kist Poultry Growers, Canton, was elected vice president.

Cool Weather Retards Western Range Feed

FARGO, N.D. — Development of new feed on western ranges was retarded by generally cool, dry April weather, according to the North Dakota Crop and Livestock Reporting Service.

Supplies of new grazing feed on May 1 were limited in northern states and in drier sections elsewhere. The ranges furnished substantial new feed in the central and southern plains. Forage prospects were improved by late April precipitation in Montana and North Dakota. However, additional rain is necessary over much of the northern plains for adequate feed grow.

The outlook for spring and summer grazing continues unfavorable in much of the inter-mountain region and southern California.



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"I'm feeding cracked corn, cracked milo, cracked barley, alfalfa pellets, cattle supplements, molasses and Stilbestrol. The ration flows down freely without bridging — and there is practically no waste. It keeps the feed in the trough fresh and clean, and my cattle are eating more."

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- Serve More Customers in Less Time . . . Lower Delivery Overhead . . . Increase Sales Volume.
- Feed Stays Fresh, Clean, More Palatable—Cattle Eat More.

Now . . . an exciting new self-feeder for cattle that's a cinch to sell! Solves your customers' bulk feed storage problems . . . you also make more profit through bigger volume sales to your bulk customers; lower your overhead costs; provide more efficient customer service. Special hopper and trough design keeps feed clean, fresh, palatable. Cattle eat more; make faster, more profitable gains. Built to give 15 to 20 years of service with heavy rust-resisting steel. Ruggedly braced throughout.

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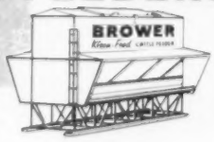

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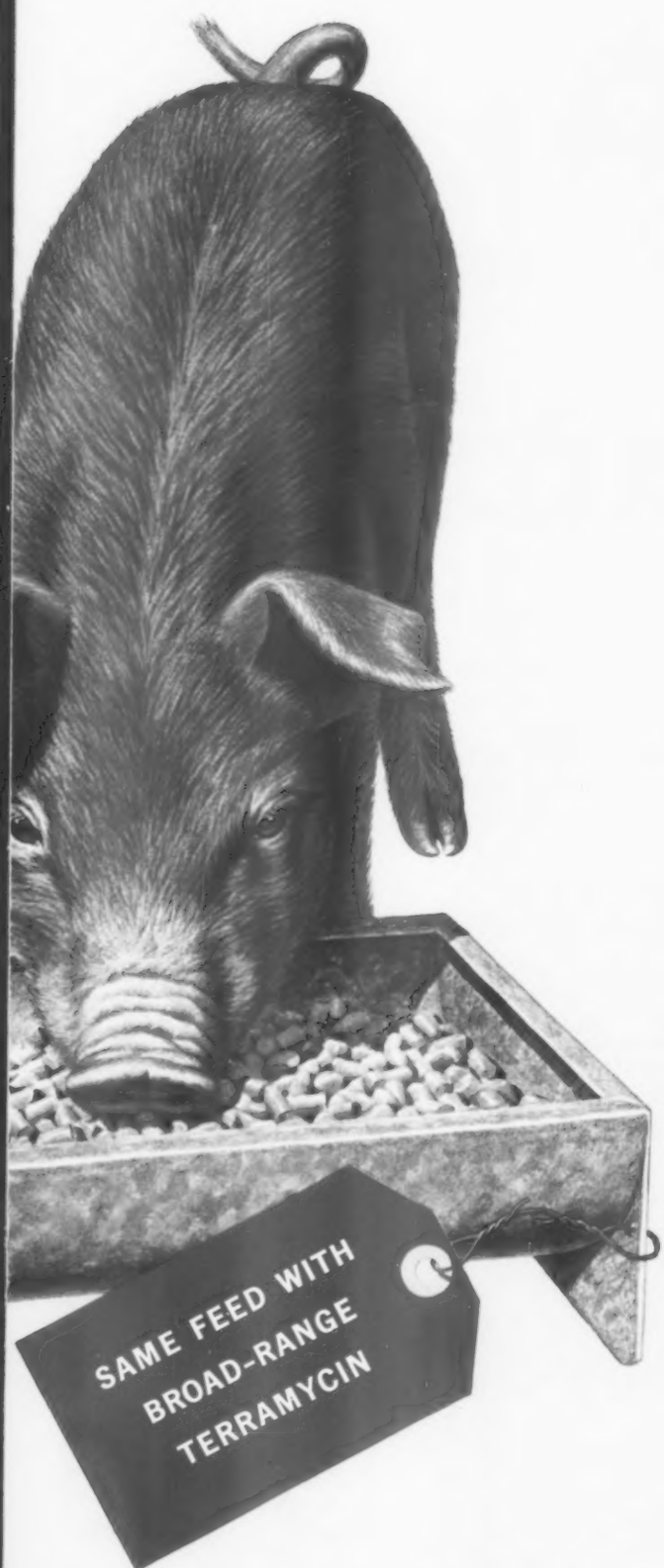

the pig starter on the left has an antibiotic that only does half a job

Just having an antibiotic in pig starters and pre-starters isn't enough any more to capture a performance and a sales advantage for your feeds—not when most everyone is using an antibiotic at this critical age.

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1. Potent Terramycin supplies extra protection with its effectiveness against an unusually broad range of disease organisms at the pre-weaning stage.

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Their pigs need extra protection, particularly against scours. Terramycin gives that protection and has a potent disease-fighting action.

And Terramycin's unusually broad range action fights other problems* that slip by hit-or-miss narrow-range drugs. It is recommended for fighting gram negative *and* gram positive organisms—including many that have become less susceptible to narrow-spectrum gram negative *or* gram positive antibiotics.

2. Terramycin supplies effective help in getting pigs off to extra gains.

Terramycin helps pigs gain faster . . . and on less feed. Tests show up to 39% heavier weaning weight with pigs fed Terramycin. And a summary of all the published trials in scientific journals during seven years of testing shows that Terramycin, over the entire feeding period to market, increased growth in 7 out of every 8 trials. The increases ranged up to 22% . . . averaged over 7% .

The gain-producing potential of Terramycin is especially important during the pre-weaning age. New research reports from Denmark show the faster pigs grow before 8 weeks of age, the leaner their carcasses at slaughter. So this extra growth can give a potent stake in final profit when slaughter grades come in.

3. Terramycin has extra sales appeal.

Terramycin is a word that hog producers have come to recognize and depend on in their operations. Not because of promotion—even though that helps—but because of dependable results in helping them make a profit.

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Cattle Feeding Research Findings and Other Topics Discussed at Washington State Event

By DR. I. A. DYER
Washington State University

PULLMAN, WASH.—Eleven topics were discussed at the 7th annual Beef Cattle Day at Washington State University. Although many topics were discussed, the major emphasis was on economy. This was appropriate since cattle numbers are approximately 5% higher than a year ago and the price has declined accordingly.

BY-PRODUCT FEEDS FOR BEEF CATTLE—Dr. W. W. Heinemann, associate animal scientist, Irrigation Experiment Station, Prosser, Wash., discussed the use of by-product feeds for beef cattle. He stated that all farm animals can utilize effectively one or more of the by-product feeds produced on farms. The number of by-product feeds available to cattle feeders in the Columbia Basin area has increased greatly with the irrigation of farm lands. It has been estimated that feeders along the Pacific slope have well over 100 such feed materials from which to choose. These feeds vary considerably in quality, price and supply.

One of the important factors that has contributed to both large-scale and farmer-operated feedlots in the western states has been the abundance and variety of by-products suitable for cattle feed. This area could not compete with the Midwest if it were necessary to compound rations from conventional feeds. In general, by-products have their greatest value in the areas in which they are produced. This is true simply because handling and hauling increase the cost. Any by-product should be considered in relation to the primary ingredient it is to replace.

A brief list of by-product concentrates and roughages and their uses in the feedlot, as compiled by Dr. Heinemann, is shown in Table 1.

CHOLINE AND ENZYMES FOR FATTENING CATTLE—Dr. Irwin Dyer presented the results of work done with choline and enzymes at Washington State University. He stated that choline, a B vitamin, has been shown to be a dietary essential for the monogastric animals and the immature ruminants. However, heretofore, it has not been considered as an essential ration ingredient for mature ruminants.

Choline was used in four preliminary trials at Washington State University to test its lipotrophic effect. In these tests, a noticeable increase in growth, especially during the early feeding period, was observed. Results from a fifth study indicate conclusively that the fattening steer does not synthesize sufficient choline under all conditions. (Table 2.)

Dynafac singly and in combination with choline, also was used in this test. When fed singly, it resulted in gains comparable to those produced by choline; however, these two compounds in combination were not compatible.

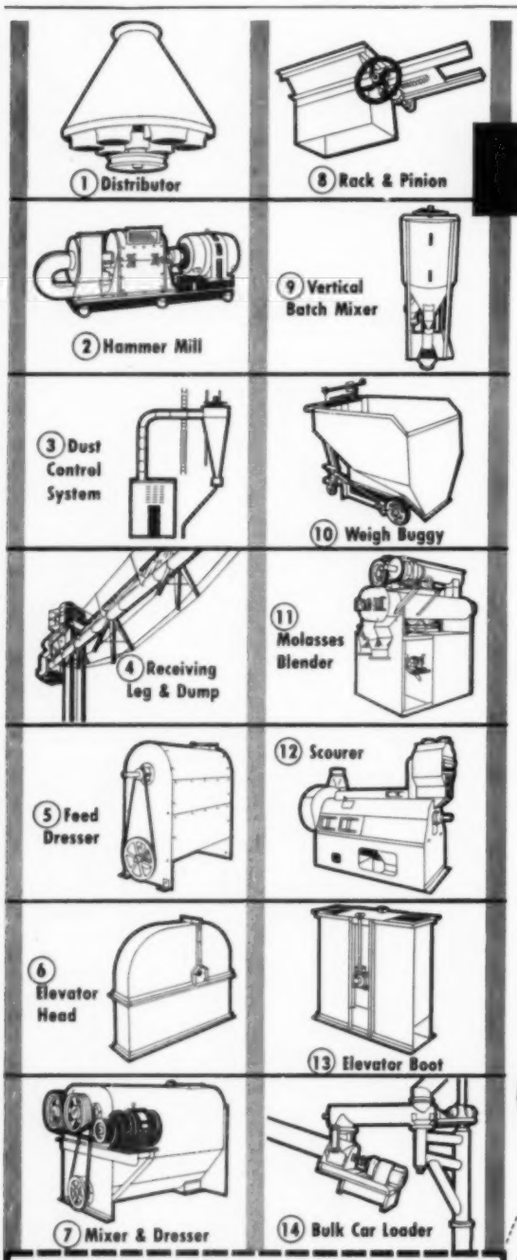
The mode through which choline exerts its beneficial effect in beef cattle has not been determined. Further tests need to be made on this compound to ascertain the correct level, the feeds with which it is most effective and the other feed additives with which it may be used.

Many enzymes are necessary for the proper digestion of feeds. Digestive enzymes increase the rate of breakdown of the different nutrients without themselves being used up in the process. Supplementation of a ration with an enzyme is an attempt to augment those produced by the animal and the microflora.

Responses to enzymes have varied to date. Work at Washington State University in three experiments with Agrozyme has resulted in an average increase of .20 lb. per head per day and reduced the amount of feed required per pound of gain by about .35 lb. In general, the enzymes increase performance more on barley rations than on similar corn rations. Furthermore, the response at the beginning of the feeding period is generally greater than at the end. Other workers, under different conditions, have reported less, nevertheless real, responses to enzymes.

Various enzyme preparations are now on the market, most of which are effective under a given set of conditions. No one enzyme will be effective in increasing beef cattle performance under all conditions. The feed used and age of the animal will influence the enzyme's effectiveness.

NYLON BAG TECHNIQUE FOR MEASURING DIGESTIBILITY—John Clark reported that the digestion taking place in the rumen can be measured by putting a known amount of feed in a nylon bag, leaving it for a particular length of time in the animal, removing the bag, and assuming that all weight loss is the result of digestion. Bags can be placed in the rumen by either forcing the animal to swallow them or plac-



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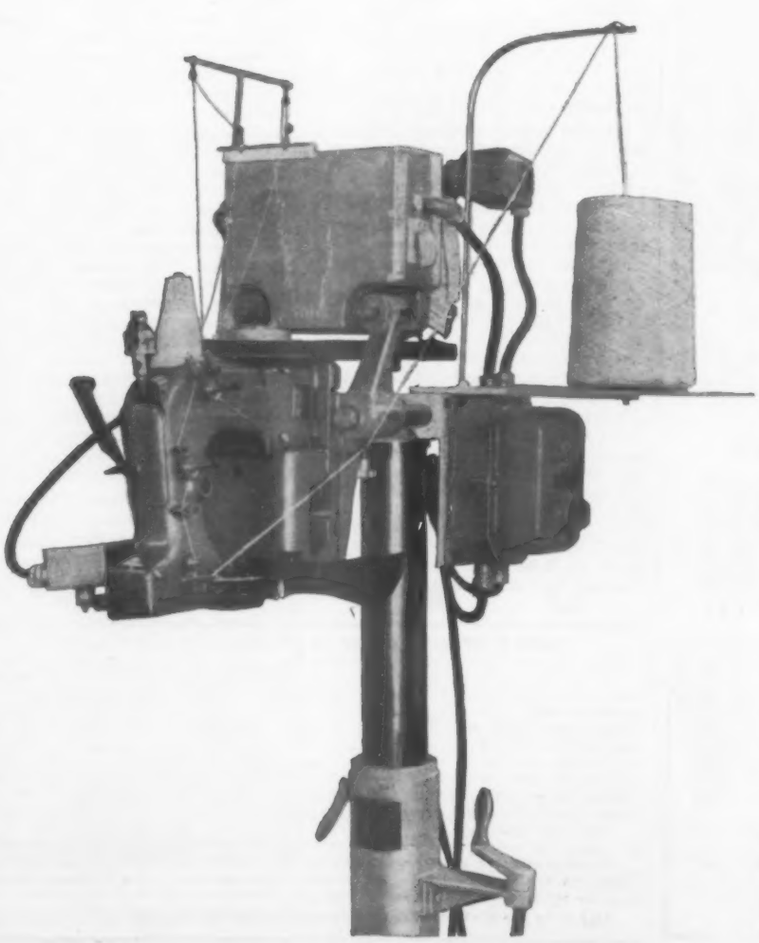

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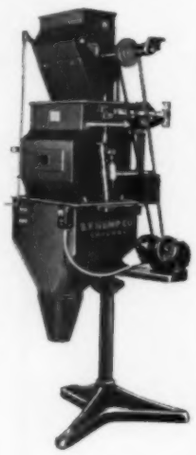

Accurate, simple to install and operate—and requiring almost no maintenance—Edtbauer-Duplex Weighers give years of the most satisfactory service. Fifty-pound bags of feeds, including pellets and crumbles, are accurately weighed. Smaller models efficiently handle pet foods, rice, corn meal and other cereals, pancake and whole wheat flours, and other mill products in packages from two to 50 pounds. Our engineers will be glad to help you plan a practical, economical installation.

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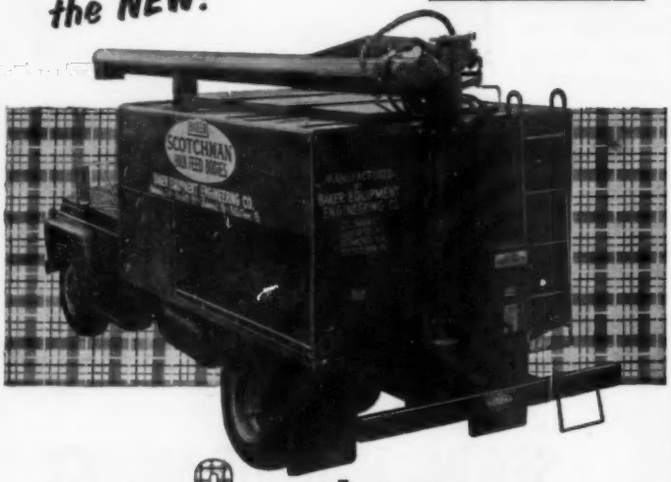

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TABLE 1. Comparative Feeding Value of Different By-Product Feeds

By-product	Feeding value, % compared with Barley	Alf. hay	Suggested feeding rate	Remarks
Alfalfa straw	....	25–50	Up to 50% of roughage allowance	Residue from seed production.
Beans, cull	80–100	....	15% or less of the grain	Palatability low; mix with other ingredients after grinding.
Bean straw	....	50	Up to 50% of roughage allowance	Feed in addition to high quality roughage.
Beet pulp, dried	90–95	....	20 to 35% of the grain	Excellent to "lighten" ration; outstanding bloat controller.
Cereal straw and chaff	....	20–50	20 to 30% of roughage allowance	Chaff more valuable than straw; supplement with protein, ready available energy, additional mineral and high quality roughage.
Corn cobs, ground	....	10–20	20 to 30% of roughage allowance	Same as cereal straw and chaff.
Mint hay	....	80–95	50 to 75% of roughage allowance	Cured with difficulty; cattle tire of it after prolonged feeding.
Peas, cull	100–115	....	To balance protein needed	Can replace up to 40% barley; should be ground.
Pea straw	....	45–75	30 to 70% of roughage allowance	Feed in addition to good quality roughage.
Potatoes	20	....	Up to 75% of roughage	Supplement with high quality hay, grain and protein.
Potatoes, dried	90–95	....	15 to 25% of the grain allowance	Regrind after drying to improve palatability.
Swet corn cannery refuse silage	....	30	Up to 75% of roughage allowance	Feed same as well eared corn silage.
Sweet corn stover (green)	....	40–50	30 to 50% of roughage allowance	Is good grazing feed.
Wheat bran	100–105	....	10-15% of the grain	Fed by showmen.

ing them directly into the rumen by way of a permanent fistula. The fistulated animal is the easiest to work with in ruminal digestion studies due to the ease of direct entry into the rumen.

The procedure employed at Washington State University for obtaining rumen digestibility of feeds is as follows:

1. A permanent fistula (picture window) is made in the rumen of a steer.

2. Feed samples are ground, dried, weighed and placed in a small nylon bag. These bags are attached to a plastic stick and suspended in the rumen.

3. The sample is left in the rumen for 24 hours.

4. The sample is then redried and reweighed.

Since the nylon mesh does not permit the feed particles as such to pass through, the disappearance of the feed while the nylon bag is in the rumen is a result of digestion.

RANCH AND FEEDLOT EQUIPMENT — George Delany spoke on ranch and feedlot equipment. He stated that some factors need to be considered before actually arranging the working parts of the corral. Some of these are: the site, the area available, the farmstead arrangement, expansion possibilities, and access; type and size of operation, cow-calf, or feedlot; operations to be performed at this location; labor, and individual and personal preference.

Mr. Delany suggested some guides to be used in planning. These include: 2 ft. of feeder per head; a minimum of 50 ft., preferably 100 ft. of depth on feedlots; all gates of a standard size and pattern; chutes leading to the squeeze should be at least 20 ft. long or hold 3 animals; loading chute must be accessible for truck-trailer combinations as well as farm trucks; gates must be in the right places. Further, he recommends steel chutes as being better and safer than those made largely of wood.

WAFERING FORAGES IN THE FIELD—Paul Blount, S&W Farm Equipment, Inc., spoke on the economy and feasibility of wafering forages in the field. Mr. Blount prefaced his talk with a discussion of haying methods as they have developed over the past 20 years. He indicated that under present hay producing methods, a total of about $20,800 is represented in equipment for baling and storing hay.

Mr. Blount then described the wafering machine now being produced by the Lundell Co. He described the new way of wafering hay into 2 in. by 2 in. (bite size) cubes. This hay is homogenized and prepared in such a was as to make it necessary for the animal to eat all the hay, if any of it is eaten. This one machine cuts, conditions and windrows the hay. There are also several other attachments that will make silage, grind feeds, shred and load bedding, and many other jobs.

Hay prepared in this way makes it necessary to turn the windrow when a moisture content of 50 to 55% is reached. When the hay in the windrow reaches 15 to 18% moisture, the wafer machine picks it up with flail pickup, homogenizes it, and forms it into wafers. It is elevated into the trailing wagon or truck. One more machine, the windrow turner or wheel rake is used, making a total machine cost of about $8,500.00. The end product is one that is easily handled with a flighted elevator, easy to store in a snow-fence corn crib and taking up only one third to half the space of bales. The cost will average about 32¢ per ton at a capacity of between 5 and 6 tons per hour.

OUTLOOK FOR BEEF CATTLE—Karl Hobson, extension marketing price specialist, reported that the price of fed cattle in 1961 may average a little lower than in 1960. The

TABLE 2. Effects of Choline on Performance of Feedlot Cattle*

	Control	Cholina†
Number of steers	143	69
Average initial weight, lb.	867	879
Average final weight, lb.	1,109	1,137
Average daily gain, lb.	2.34	2.51
Average daily feed, lb.	30.70	32.08
Average feed per 100 lb. gain, lb. (inc. silage)	1,309	1,273
Average digestibility of dry matter, % (nylon bag technique)	58.7	58.1

*A cooperative test between the Department of Animal Science, WSU and the Bar-S-Ranch through the courtesy of Guy Boyd. Appreciation is also expressed to the Commercial Solvents Corp. for providing financial aid and the choline.

†Fed at the rate of 13 gm. of choline chloride (25%) per head per day.

drop is not likely to be as great as last year, if business increases during the last half of 1961. This year, to date, the markets have been supplied with more fed cattle than in the corresponding months of last year. That is because there were 6% more cattle on feed in the major feeding states at the beginning of the year. Total slaughter of beef in January and February was only 2% larger than a year earlier.

It appears that the recession has had a measurable influence on the demand for fed beef. If a substantial improvement in business occurs in the remainder of 1961, fed cattle prices may rise enough in the latter part of the year to give an average price for fed cattle close to that of 1960. The rate of increase in cattle numbers slowed considerably in 1960. In fact, the increase will no more than take care of our growing population and the rising trend in the demand for beef.

Mr. Hobson summarized by saying that uncertainties in cattle price trends for the next three years will be greater than usual. If cattlemen will avoid increasing numbers at too rapid a rate on one extreme and a drouth-forced liquidation on the other, cattlemen may expect considerable stability in the cattle business, provided business, employment, and price levels are fairly stable.

BEEF CATTLE IMPROVEMENT PROGRAM—Dr. Harold J. Hill, director of Armour's Beef Cattle Improvement Research, reported the progress of Armour's BCI program to date. Dr. Hill pointed out that one of the objectives of BCI was to establish a practical method of using semen from critically tested sires by artificial insemination of range beef cattle under extremes of conditions relating to pasture size, terrain, grass cover, season, feeding and management practices, and breeds of cattle. According to Dr. Hill, one of the first progressive steps of BCI was to create Codding-Armour Research, a bull development and evaluation station located on the C. H. Codding & Sons' Ranch at Foraker, Okla.

Data needed for the BCI sire evaluation includes birth date, actual weaning date, 205-day adjusted weight, grade, dam, dam's age, dam's average production, initial in-weight, final weight, average daily gain and average daily gain corrected to the particular bull.

Even though much is known about the capacity of the BCI sire to transmit desirable characteristics to calves born within the 1,000-cow Codding-Armour herd, as yet it has not been established that he will continue to perform as admirably when bred to randomly selected cows in various herds across the country. Therefore, their "Quality Control" program continues to sample the calves from the various ranches, establishing comparative weaning weights, feedlot gains, and carcass merit on positively identified calves purchased from the cooperating ranchers.

Two calf crops have been purchased since the program began. Though the purchasing of calves from the sires who have undergone their initial screening test at Codding-Armour has not been made, it is felt that progress has been made in this short period of time, spanning two breeding seasons and involving approximately 14,000 cows.

The 6,000-odd, positively identified calves which have been assembled at Armour feedlots at Cozad, Neb., representing the offspring of about 20 different sires, show one very important characteristic — uniformity of size and conformation. Even in the relatively few studied extensively, uniformity has been evident to people in the packinghouses.

One problem stands out as influencing most heavily the success of an artificial insemination program—the skill of the cowhands who are assigned the task of detecting the cows in heat. Although it is quite true that the general management of the herd throughout the year and the condition of the cows after calving are extremely important, the success or failure still revolves around the men doing the observation—their persistence and their accuracy.

Dr. Hill indicated that the philoso-

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BEET PULP
AND 44 OTHER FEEDS

phy of artificial insemination is sound, and the techniques can be carried out on ranches in a very practical and economical manner. But the underlying basic principle which provides the only valid excuse for using the technique—the principle of disseminating desirable genetic characteristics among thousands of females—is still in its infancy.

One of the most obvious and as yet most elusive predictions to be made is estimating what is under the hide of a live bull without slaughtering him or his progeny. Ultra-sound depth readings of the rib-eye and thickness of fat cover over the loin is one way of looking under his hide. Another method of reconstructing an animal on paper without having to cut him into his component parts is through a technique called photogrammetry. This is a process of taking stereo photographs of a living animal. Then by placing the twin stereo photographs in a reading machine, it is possible to reconstruct, in minute detail, every portion of the animal in three-dimensional geometry.

The BCI program also is concerned in the economics of feeding cattle for profit. Data from various university feed trials indicate that the amount of feed required per pound of gain can vary from 5 to 15 lb. In other words, feed costs can be 300% higher for your most inefficient feed converters.

Progress through Armour's Beef Cattle Improvement Research has been considerable during the short period of its existence. The objectives of this program are far reaching and dynamic in nature, and will inevitably benefit every segment of the livestock industry.

EFFECT OF HERD SIRE—Dr. C. C. O'Mary reported on the effect of the herd sire on weaning weights of calves and their subsequent performance in the feedlot. He reported that there are real differences in herd sires, and that it is becoming increasingly important that they be more thoroughly evaluated. Sires that look much alike may be of considerably different potential value in producing saleable calves for the cow and calf man or in producing profitable feeder cattle for the feedlot operator. Furthermore, genetic gains in the producing herds are cumulative over the years and pay dividends to both the producer and the feedlot operator. As feedlot operators learn of cow herds producing potentially "good-doing" feedlot cattle, they can afford to pay a premium for them. Differences of $250 to $500 on 25 calves, if applied at the same rate to the feedlot operator feeding 5,000 annually, would mean $50,000 to $100,000. The shrewd feedlot operator will no longer buy a "pig in a poke." Also, "Let the buyer beware" cannot be the attitude of the smart cow and calf man. He must know the potential of his cattle and make it known to the buyers. We now have reached on era that calls for a change in the slogan from "Ignorance is bliss" to "Knowledge is money in the bank."

PRODUCTION TESTING—Joe Johnson, livestock extension specialist, chairmanned a panel on production testing. This panel consisted of the following county extension agents: Philip Bloom, Gordon Woodrow and Robert Williams.

Mr. Bloom outlined a system that has been found to work successfully for the commercial operator with a minimum of handling. This procedure is begun at weaning and includes the sorting and weighing of all calves, not individually, but as a lot. Then the small, lightweight off-type calves are culled and turned back with the cow herd. In this way, the cows that are producing poor calves are identified. Replacement heifers are selected at this time. These heifers are then wintered as a group and the heifers that are the poor gainers during the winter are culled the next spring. This group of heifers retained, also provides an excellent place to test new bulls. The final selection of replace-

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FEEDSTUFFS

Don Sanderson (left, center) reports, "We have fed nine thousand cattle on Stilbosol rations. All college feeding tests, plus our own experiences, proved to us that you can't stay in this business without Stilbosol."

"Our cost of gain went down 4¢ a pound when we put Stilbosol back in our ration"

"We're feeding Stilbosol again... this time for keeps," reports Don Sanderson, S&J Feedlots, Norton, Kansas.

"Right after we went back to Stilbosol, we had a load of steers come in. We fed them for 140 days and they gained 448 lbs. per head.

"We figure our cost of gain with Stilbosol to run about 19 to 20¢ per pound. Without Stilbosol, our cost of gain shoots up to 23 to 24¢ per pound.

"If we don't feed Stilbosol, we lose about ¼ lb. daily gain per head. By the time it takes to fatten cattle for market, this loss of gain amounts to $9 or $10 a head. As close as they keep the margin on fat cattle, that $10 a head that Stilbosol gives you is most of your profit these days.

"A man couldn't last in this business if he didn't feed Stilbosol. Oh, sometimes he can make a profit if the margin is high enough, but in the long run he's going to go broke," Don concluded.

After seven years, Stilbosol continues to give feeders an extra 15% gain on 10% less feed.

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ments should be made after the heifers have weaned their first calves. This type of a production testing program can be used by any operator without individually marking his cows or numbering his calves or individually weighing animals.

Mr. Bloom also suggested a preferred system in which each cow is identified and individual record sheets developed. Under this system, calves should be ear tagged at birth and their numbers and weights recorded on the dam's record sheet. Further, they should be individually weighed and graded at weaning time, and the heifers and bulls that are selected for replacement should be put onto a 150-day feeding test. Following this feeding period, the animals are again individually weighed and graded. Cows producing calves of poor weaning weights and grade or those producing poor feeders should be the first culled, regardless of their pedigree. A sire record also can be maintained in a similar manner and their productivity determined.

Robert A. Williams discussed beef cattle management practices as affected by production testing. He suggested that improvements in beef cattle result from two general practices. The first is the improvement through breeding. The second is concerned with improving the environment of the cattle through better nutrition, control of disease and parasites, housing and similar practices. The improvement of the environment brings about temporary increase in productivity, while breeding improvement is more permanent and has a cumulative effect on the herd. From the standpoint of improvement of beef cattle through breeding some of the most rapid advances in improvement of quality feeder calves have been made where bull grading is practiced. More rapid improvement in the breeding program can be made by the judicious use of a pair of livestock scales than by any other method. Another management factor which often develops as a result of performance testing is the final selection of brood cows on the basis of the first calf produced. Observing carcass quality in the finished steers is another management practice which is not but should be considered in production testing programs.

Gordon Woodrow discussed the kind of bulls the breeder wants, i.e., those that produce steers which grow rapidly and efficiently in the feedlot. Further, they should produce steers with the kind of carcasses that will be in demand by the buying public. Items generally included in the production testing record are fast, economical gains, desirable conformation, quality and tenderness. Other items that are actually a part of production testing and which can be recorded include disease resistance, length of life, freedom from defects and milk production.

Production testing can give cattlemen and the cattle industry important benefits. The cattle industry must supply beef of high quality and at a price that can be afforded. Production testing will help the beef cattle industry do both of these.

Stabilized Vitamins report

Late Pregnancy Increases Carotene and Vitamin A Needs

• Three to five times as much carotene is required by beef cows in late pregnancy as will suffice for maintenance. This becomes especially important in view of the decrease in carotene content of hay during storage. Deficiency often results in a weak abnormal calf and in retained placenta.

Oklahoma State University Tech Bul. T-76 March 1959

The ANRC Vitamin A Reference Standard

• The Animal Nutrition Research Council in 1959, through its Technical Projects Committee, introduced a Proposed Vitamin A Reference Standard. This has been extensively checked by qualified workers and arrangements have been made to distribute it through representatives of the U. S. Pharmacopoeia.

Beef Cattle Show Symptoms of Vitamin A Deficiency

• Lameness and anasarca or edema in the brisket, knees, hocks, and hoofheads were pronounced, the animals were generally in an unthrifty condition, and the hair was dull and dead. Night blindness and a looseness of the joints or muscles were also seen.

Stabilized dry vitamin A was at least twice as efficient as carotene from alfalfa meal in correcting the condition.

A. L. Neumann, Illinois Nutrition Conf. 1960

Massive Vitamin A Doses Not Efficient

• Feeding 100,000 I. U. of vitamin A per head daily for five days to steers or heifers had no effect on subsequent feedlot performance. Plasma vitamin A values were highly variable. Some of these animals later developed vitamin A deficiency symptoms.

O. E. Kolari and A. L. Harvey
Minnesota Beef Cattle Grassland Field Day 1960

SV# 8

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A firm, advertising their product, once stated: "Money returned if not satisfactory."

Someone applied for the return of his money, and the reply he received was: "Your money is quite satisfactory and therefore we decline to return it."

◆ ◆ ◆

"George," said the wife to her slightly tipsy husband as they left the cocktail gathering where he had been the life of the party, "Did anyone tell you how witty you are?"

He looked at her, pleased. "Why no dear," he said, "I don't think anyone ever did."

"Well," she snapped, "then where did you ever get the idea?"

◆ ◆ ◆

Ad in newspaper: "Wanted: Husband for beautiful blond, age 18. Must have money to support her in absolute luxury. Taste runs to mink, caviar, diamonds. Applicant please write 'Desperate Father,' Box 44."

◆ ◆ ◆

Frank was talking to his wife, Alice, while the little old lady sat in the living room knitting. "Now, look, Alice," he whispered, "I don't want to sound harsh, but your mother has been living with us for twenty years now. Isn't it about time she got an apartment of her own?"

Alice gasped. "My mother?" she said. "I thought she was your mother."

◆ ◆ ◆

"If you like to travel," the manager of the employment agency told the job applicant, "I have a job open in Florida. Can you pick lemons?"

"I sure can," was the man's grim reply. "I've been married five times."

◆ ◆ ◆

"Spring peepers chant in the lowlands;
Birds carol in greening bower.
The best music a man ever hears
He sings to himself in the shower."

◆ ◆ ◆

A cool musician was strolling down Broadway when he came upon an old organ grinder playing his beat-up instrument while a little monkey did a dance and doffed his cap for coins.

The musician stopped, watched for awhile, then remarked, "Man, I don't dig your music but that crazy kid of yours has got a lot of talent."

◆ ◆ ◆

"You know dear," the young wife said to her husband, "you don't seem as well dressed as you were when you married me."

"I don't see why not," he replied. "I'm wearing the same suit."

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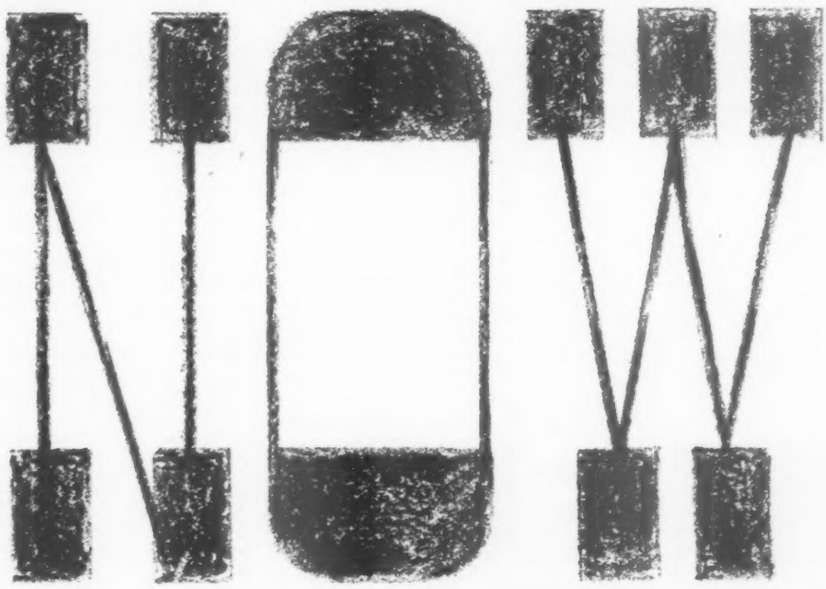

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The addition of small amounts of the new water-soluble ethoxyquin gives the Dehy you buy added protection for Carotene (provitamin A), for alpha tocopherol (vitamin E), and for Xanthophyll (pigmenter).

Now you can rely on the vitamin content of dehydrated alfalfa from spring harvest to ultimate consumption.

Addition of only 0.015% of ethoxyquin (Santoquin®) to alfalfa during the processing following dehydration protects its essential nutrients from oxidative destruction.

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Board of Trade, Kansas City 5, Missouri

American Dehydrators Association

Speaker Emphasizes Need for Knowledge of Both Product, Customer

BATON ROUGE, LA.—The need to know both the product and the customer, the danger of putting too much faith in new products, and creativity in marketing were emphasized here by Lee Campbell, merchandising director of the Institute of American Poultry Industries.

Speaking before the third annual egg marketing school at Louisiana State University, Mr. Campbell said the future of the egg industry is as boundless as the imagination of those in it.

Referring to a recent consumer-use study made recently by the U.S. Department of Agriculture, Mr. Campbell questioned whether the egg industry had really studied the report and geared sales programs accordingly. "We think," he said, "and worry constantly, ceaselessly, about production and processing. Our competitor's every move is agonizing. But we don't spend enough time studying the facts about the consumer—what she wants, or will buy."

Cautioning those who think new products are the only answer to falling sales, the speaker said, "I do not believe that the shell egg processor and marketer need only sit around while new product development comes along to answer his sales problems. We must not be lulled to sleep by the music of new products in the distance.

"There's plenty of room for creativity in shell egg marketing," the speaker said. "With sales falling, how long did we sit around before we did something about the cartons our eggs are sold in?"

Pointing to the new types of cartons—with wax overwraps, or film overwraps, or four color, Mr. Campbell said it was good to see that an egg carton was one of two packages to win awards in two categories in the 1961 Folding Box Competition.

Enthusiastically looking at the growing population, increased consumer income, more research, more needs, and more jobs, Mr. Campbell said, "All the elements for success are around us. But to take advantage of those prospects you've got to sell. You are going to decide what your market is and what it wants. Use the facts available to help you."

The need for advertising and promotion of brand names was stressed. Build consumer acceptance and loyalty, Mr. Campbell said, but he cautioned his listeners not to expect to recover promotion expense in just one sale.

BURNED OUT FIRM WANTS SUPPLIER CONTACTS

ASHLAND, KY.—Myers and Clark Co., Inc., is in the process of rebuilding its plant here which was destroyed by fire last October, according to R. H. Myers, president.

However, Mr. Myers says he has a problem. All of the plant's records were destroyed in the fire, so he is appealing to all former suppliers and all interested suppliers to place his firm on their mailing lists.

He said that information, catalogs and price lists will be invaluable to him in starting new files for the firm.

Ross Machine & Mill Appoints Rex Hubbard

OKLAHOMA CITY, OKLA. — Appointment of Rex Hubbard as sales manager of the Ross Machine & Mill Supply, Inc., Oklahoma City, has been announced by Henry Stark, executive vice president and general manager of the company.

Rex Hubbard

Previously, Mr. Hubbard was a sales engineer with the Strong-Scott Mfg. Co. of Minneapolis, and was a district manager of its Kansas City office.

A graduate of Kansas State University's flour milling school in 1954, Mr. Hubbard has been associated with the corn milling division of General Foods Corp., and was with the Coleman Co. of Wichita, Kansas, prior to joining Strong-Scott.

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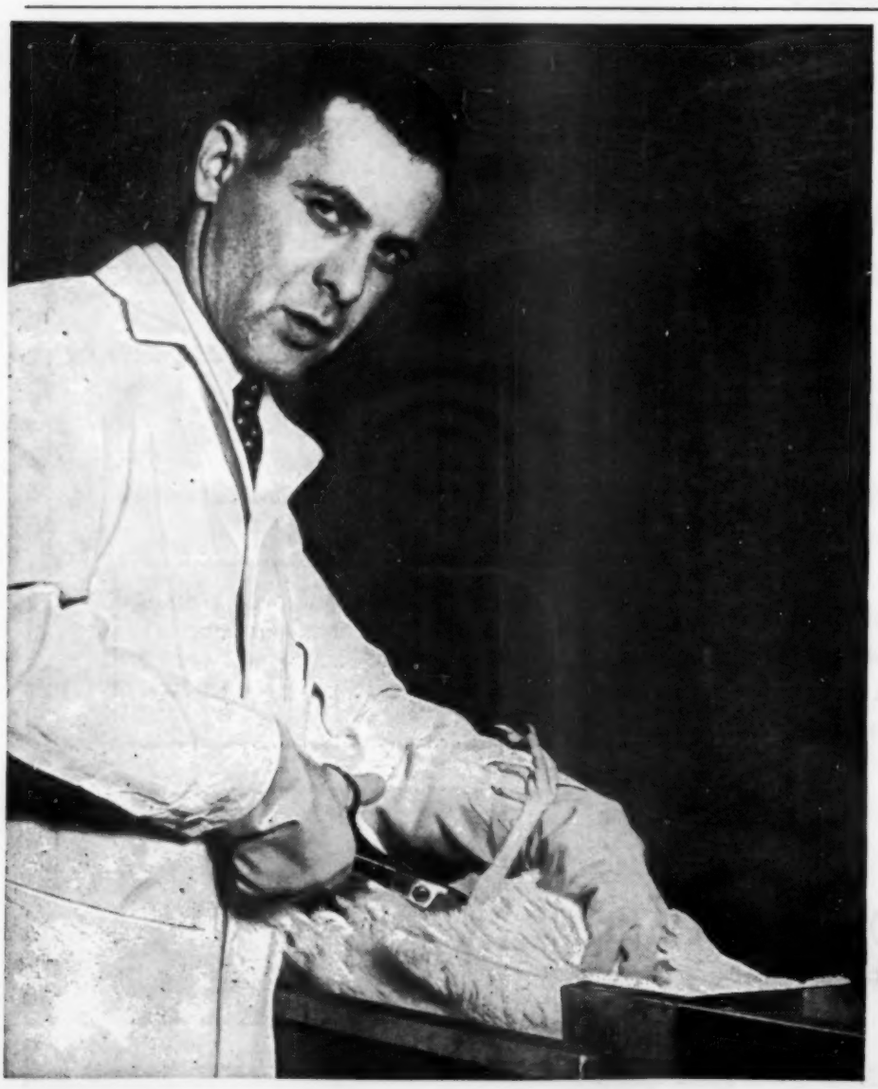

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Second in a Series

What Individual Feed Men Say About Farm Grinding, Mixing

By Al P. Nelson
Feedstuffs Special Writer

Is the average feed man alarmed about the threat of on the farm grinding and mixing?

As told in last week's Feedstuffs, not too many feed men regard farm mixing as a pronounced threat to their existence as yet. A majority of feed men visited were not alarmed, but a few in specific areas were. Here are some case histories in which individual feed men give their views:

Walter Daily, Daily Mill & Elevator, Palestine, Ill., makes Mitifine Feeds, produces corn meal, buckwheat flour, whole wheat flour and handles Swisher feeds. Mr. Daily reports that when he bought the mill 15 years ago, there were many hammermills in operation on farms. Now, there are only a small number. The largest volume is on hog and poultry feed at this mill. Diversified farming here cuts down on number of hammermills, Mr. Daily believes.

Harry Maurer, manager of Farmers Grain Co., Wapakoneta, Ohio, states that there is very little farm mixing in this area. He knows of about 10 farmers who have hammermills. Whether a farmer will grind-mix on the farm depends on how much of a specialty feeder he becomes, Mr. Maurer declares. Diversified farmers probably prefer to get grind-mix done at local mill.

"We get new grinding accounts from some farmers whose hammermills wear out, and these customers do not want to buy new mills," Mr. Maurer pointed out. "This can mean that they realize the local mill can do a better job, and also that the farmer is scrutinizing closely the investment in farm-mix equipment. We are not worrying about the farm-mix threat yet."

Other Examples

Harry Robinson, mill manager, Baltic Mills, Vincennes, Ind., says that out of 350 customers only six accounts do some grinding, and they are not large feeders. Mr. Robinson classified a large feeder as someone having at least 600 head of cattle or 1,500 head of hogs. Baltic Mills makes hog, cattle and poultry feeds. Special services to feeders, such as making of 4-H show stock feeds, and ground corn cob feed, with concentrate and molasses, aid in getting feeders here to consult in feed needs.

N. Orrin Baker, Baker's Feeds, Inc., Leland, Ill., reports that his firm is contacted now and then by farm mixers who want to buy ingredients, such as soybean meal. He contacts such accounts, views their operation and often can show them that Baker's can supply their feed needs at lower cost. In several cases he has pointed out that with a $3,000 mixer investment, a 100 ton a year feeder has a depreciation of $3 per ton, not to say anything about labor. Economics of this sort have helped bring a number of farm mix customers to Baker's for service. The firm makes its own feeds and has a sizable custom pellet plant.

Grain Bank

William Fox, manager, Hume Equity, Inc., Hume, Ind., states that there is not very much farm mixing in this area. He believes one reason

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. . . MORE REPEAT SALES!

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When Dairymen smell new NECTARIZED Blatchford's Calf-Pab's delicious aroma, they want to buy it. When they see how their calves go for its extra smackin' good milk flavor—they come back for more! Their calves eat better, grow better. Low cost . . . proved high quality . . . Calf-Pab gives you a high mark-up profit.

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The new Stohr Roto Shovel puts a giant pulling power of 1300 pounds right at your fingertips, thanks to its radically different push-button control. Just push the button and it starts . . . release it and the "dead-man" switch stops shovel travel instantly.

One man handles the entire operation safely and easily without extra help or bulky equipment . . . . no heavy counterweights, no need to completely unreel the cable every trip. Start anywhere you like.

Despite its rugged power, the Roto Shovel is so compact and light that you wheel it from job to job . . . even carry it in the trunk of your car, ready to work in seconds.

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THE HERMAN NAGEL CO.
63 W. Jackson Blvd., Chicago 4, Ill.

is that his mill gives excellent service to patrons, and that the company has a grain bank plan. The firm makes a line of supplements for poultry and hogs, as well as doing custom work. One third of the business is in bulk. The firm has one poultry customer who buys six tons of supplement at a time. "Good service by a custom mill, plus nutritional help, is probably one answer to the farm mix problem," says Mr. Fox.

Dexter Obenhaus, owner of the Community Feed Mill, Princeton, Ill., states that farm mixing doesn't progress where farmers get good service from local custom mills. There is not too much farm mixing in his area.

Mr. Obenhaus also points out that on landlord-tenant contracts, the landlord pays half of the transportation and the grind and mixing costs. However, if the tenant does his own grinding and mixing on the farm he must pay all the power costs and furnish the labor. "This provision in many of these contracts discourages farm mixing," Mr. Obenhaus says. "Some landlords feel that such a clause encourages the tenant to consult with and get the cooperation of a qualified feeding expert."

Henry Conrad, owner of Conrad Milling Co., Seymour, Ind. (Purina dealer), reports that there is little farm mixing in his trade area. He has a fine custom mill and likes to give his patrons excellent service. His grain bank plan and grain drying service help to ward off farm-mix competition, he says. He feels that being willing to help customers and advise them on poultry and livestock feeding problems wins many customers to custom mill service.

Benny Sower, manager of Best Feed & Seed Co., Toledo, Ill., a Swisher dealer, says that there is only a little farm mixing in his territory. The owner, Clinton Best, and Mr. Sower, concentrate on showing farmers how to lower their feed costs by using Swisher feed and mixes with their own grain. This advice, plus actual proof records, is the type of help many farmers want, and which they would probably not ask for if they had their own farm mix equipment and operated on an independent basis.

Bruce Glezen, Mont Eagle Mills, Oblong, Ill., states that about 10-12 hog and cattle feeders in his area have their own grind-mix equipment. However, there are many customers who prefer custom mill service, plus the nutritional knowledge that they can receive here. This custom mill, which also makes a line of complete feeds, has a five minute news report on a local station three days per week. Commercials advertise Mont Eagle feeds, plus custom mill and other services.

Russell Gustafson, manager of Cooperative Supply Co., Princeton, Ill., says there is very little farm mixing in his area. One feeder about 10 miles distant has a $6,300 grind-mix setup and the Cooperative Supply Co. sells him concentrate. During 1960 this firm sold 5,800 tons of Purina concentrate and complete feeds, Mr. Gustafson reports, to rank near the top in its division.

Jack Osterman, Jackson County Farm Bureau, Seymour, Ind., says that his field men report very little on the farm grinding and mixing in the area. He believes this is due in part to the fact that farmers get excellent service from local mills and at reasonable rates. Hogs, cattle and dairy cows, as well as some layers and broilers, are raised in this region. Farms are not too large, but there is much diversification. The Seymour Farm Bureau has a veterinarian on a retainer basis for its customers. This service feature is appreciated by many customers, he states.

"I don't think farm mixing will spread," says one Ohio dealer, who didn't want his name published. "The modern farmer still needs advice and specific help from competent feed men. If the farmer must rely entirely on his own knowledge and ability, he may not make a profit."

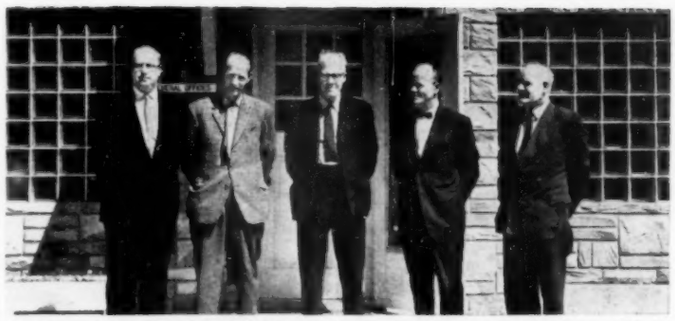
This dealer, who has two custom mills and a thriving layer contract program, states that the feeder needs to be on a sound program, especially on poultry. "He needs help to run his business and that an alert dealer can give," he said.

This Ohio feed man has cage layer projects of considerable size. He arranges with egg producers to get $15,000 or less credit through local banks to erect metal housing, etc., to get started properly. The feed man himself helps finance chicks and feed, and he markets the eggs to supers and institutions.

"If integration spreads, and I think it will in the poultry field," he says, "where can the independent feeder get the pooled knowhow and experience to can get through a sound integrated program? And to receive such help he must tie in on a regular feed program, in which small scale farm mix operations have no place."

John Weaver, Weaver Bros., Inc., Versailles, Ohio, a large egg buying firm, says that about 15 egg producers in a 25 mile area have farm-mix operations. He is inclined to think that these may increase. On the other hand, his firm may effect an integration program with a hatchery, and feed firms. In such a case, some producers who are interested in farm-mix deals might find more advantage in an integrated program involving a feed manufacturer. Some farm-mix operators have more than $5,000 invested in such equipment, he states.

This survey indicates one thing is certain—customers and feed men alike are taking closer looks at the cost of processing a ton of feed.



BRITISH POULTRY VISITORS—Delaware Poultry Laboratories, an affiliate of the animal health division of Sterwin Chemicals, Inc., played host at Millsboro, Del., recently, to a group of visiting British poultry scientists. The visitors were members of a British committee on fowl pest (Newcastle disease), which has been touring the eastern U.S. to investigate American methods for coping with the disease. Shown above are, left to right: Dr. Hiram N. Lasher, vice president and director of laboratories, Delaware Poultry Laboratories; A. C. L. Brown, veterinary assessor, British Ministry of Agriculture, Fisheries and Foods; Sir Arnold Plant, professor, London School of Economics; Dr. Donald E. Fogg, director of technical services, DPL, and Professor Alexander Robertson, professor of veterinary hygiene, University of Edinburgh.

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Tom L. Winemiller James R. Pfeil

Hess & Clark Makes Two Appointments

ASHLAND, OHIO—In recent marketing changes at Hess & Clark, Tom L. Winemiller has been named market development manager and James R. Pfeil, Jr., appointed animal health products manager. These changes were announced by Dr. A. L. Andrews, president and general manager.

In his new position, Mr. Winemiller will be responsible for market research activities of the company, including analysis and determination of selling opportunities in the animal health, feed medication and related agricultural fields. He joined Hess & Clark in 1953 as advertising manager, and later was animal health products manager.

Mr. Pfeil will be responsible for marketing and merchandising programs for the company's growing line of animal health package products.

Mr. Pfeil was formerly with another animal health products manufacturer where he served as sales representative, veterinary products manager and new products development manager.

Bemis Bag Earnings Up for First Quarter

ST. LOUIS—Both sales and earnings of Bemis Bro. Bag Co. for the first quarter of 1961 were up 3% over the same period a year ago, the company reported.

Consolidated sales of Bemis and its subsidiary companies for the three months ended March 31 were $33,471,347, as compared with $32,419,792 a year ago, and net income was $748,603, as compared with $724,749.

Earnings per share of common stock were $1.05 for the first quarter, as compared with $1.02 in 1960.

In the quarterly report to stockholders, F. G. Bemis, chairman, and Judson Bemis, president, said that both parent company and subsidiary sales were improved. This was the first quarter since mid-1960 that parent company sales exceeded the corresponding period of a year previous.

"A significant factor in future quarterly sales comparisons during 1961 will be our recently announced downward price adjustment in multiwall bags, one of our major product lines," they said.

"However, we hope to regain substantial multiwall volume which has been lost to lower prices. Also, since the effectiveness of our manufacturing cost reduction program is more apparent as volume increases, we anticipate improved earnings for the year if this acceleration is maintained."

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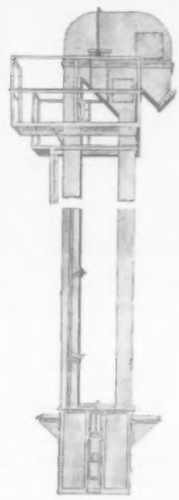
Pennsylvania Poultry Group to Meet in June

HARRISBURG, PA.—The Pennsylvania Poultry Federation will hold its annual business meeting and summer conference at Pennsylvania State University, University Park, Pa., June 29-30.

In addition to numerous talks and panel discussions, in which many well known members of the feed industry will participate, there will be a special luncheon for turkey growers, a special program for the ladies present, a buffet luncheon for all guests provided by the university's poultry department, and a golf tournament for poultrymen and all allied industry folks.

The federation's annual summer banquet will be held at the Nittany Lion Inn Thursday evening, June 29, at which time the federation's "Poultryman of the Year" will be named.



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Brand "A" penetrates fast and sure with a heavy vapor that blankets every kernel of grain. And . . .

It's thorough—the active vapor mixture kills adults, larvae and eggs. 100% active mixture, that's what.

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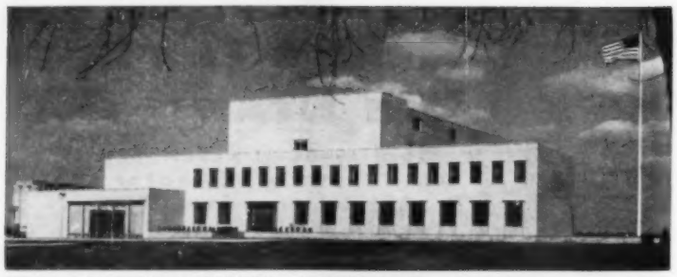
It's safer—non-explosive, and has no flash point. Has no effect on seed germination. Leaves no odor or taste when used as directed.

Diamond offers a complete line of standard fumigant formulations in addition to Premium Brand "A." For information, write Diamond Alkali Co., 300 Union Commerce Building, Cleveland 14, Ohio.

DIAMOND GRAIN FUMIGANT PREMIUM BRAND "A"

Diamond Chemicals



STALEY RESEARCH CENTER—A. E. Staley Manufacturing Co. opened this new research center May 5 at Decatur, Ill. The three-wing, 108,000-sq. ft. structure is for development of new and useful corn, soybean and chemical products, the firm said.

Staley Dedicates Research Center

DECATUR, ILL.—A. E. Staley Manufacturing Co., corn, soybean and chemical processor, has dedicated a new research center here.

Dr. James A. Bralley, Staley technical director, said that the new center will stimulate further progress, "particularly in product developments from the Staley starch fractionation process announced early this year."

Construction of the Staley Research Center was started in 1959, the dedication announcement said. The completed structure consists of three wings. The central wing of the building houses 138 fully-equipped laboratory units with modular design for grouping units in work areas and flexibility in future arrangements, the firm says.

The new building also includes a three-story wing, housing administrative offices and a technical library of some 10,000 bound volumes plus current scientific literature and information services drawing on central libraries. A two-story wing houses a cafeteria seating 150 and there is an auditorium for 225 with provisions for laboratory demonstrations.

Air conditioned throughout, the building has individual temperature controls in each room. There are four "special climate" rooms equipped to maintain specified temperature and humidity levels for research work with Staley product applications. There is also a special room for "taste panel" testing in food research.

Special facilities are provided for laboratory supplies, microscopy, spectroscopy, photography, glass blowing, equipment making, water distillation and distribution, shipping, sample storage and care of glassware.

The exterior of the building is light brick with aluminum framed windows. The interior is partitioned with enameled steel panels and the floors are plastic.

Charles Harris, Jr., of the Staley engineering department was the construction project engineer.

Dr. E. Eugene Fisher, director of chemical research, said, "The Staley company's growing interest in polychemical developments was a significant factor in planning the new facilities as well as the company's traditional interest in carbohydrates, oils and protein research."

The announcement from Staley points out that the firm's research and development staff numbers over 180 with 99 college graduates. Of that number, 40 staff members have doctoral degrees.

New Ag Career Book

COLUMBIA, MO. — A new book describing careers in agriculture has been written by Clyde H. Duncan, associate agricultural editor at the University of Missouri here.

"Find a Career in Agriculture," which is Mr. Duncan's second book, is written for high school students.

The 11 chapters of the 160-page book are devoted to agricultural job possibilities in addition to farming and ranching. Careers off the farm in research, education, government, communications, and related fields are covered.

"In its broadest sense, agriculture offers employment opportunities to perhaps one-third of the working force in the U.S.," Mr. Duncan wrote in the book. "This total results when we take into account the great number employed in agricultural business."

The job outlook is "optimistic" for young people entering agriculture, Mr. Duncan says. "For instance," he wrote, "in 1958 there were 15,000 positions open to graduate agriculturists, but there were only 8,500 new graduates with degrees in agriculture."

Mr. Duncan is a journalism graduate of the University of Missouri and has had wide experience in the newspaper field.

MILL EMPLOYEE KILLED

WAUSAU, WIS. — Rodney MacDonald, 23, an employee at the Wausau Cereal Feed Mill, smothered here after falling into 30 ft. of finely ground feed. Mr. McDonald was working alone on an elevator when it apparently became jammed. He climbed to the top of the structure and was climbing down an inside ladder when he apparently slipped and fell 25 ft. into the feed. His death was attributed to a combination of suffocation and injuries suffered in the fall.

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How you can free it from huge investment in bulk equipment.

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For one thing, a well-organized return bag program means keeping your customers. Why? Because the customer who brings his bags back to you for crediting to his account naturally buys again from you. It's an endless chain of transactions.

Thus each customer is worth hundreds, thousands of dollars a year to you.

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Distribution Center Opened by Cobb's

SILOAM SPRINGS, ARK.—Nearly 500 representatives of the broiler industry from a seven-state area drank coffee, munched on barbecued Arkansas broilers and helped celebrate the opening of a new distribution center for Cobb's White Rocks here recently.

The hatchery, one of the most modern in the industry and especially planned for the production of pullet breeding stock, was one of the major centers of attention for the visitors. Among the new features incorporated in its construction is the complete and separate heating and humidity controls for each room. It is believed to be one of the first installations in the country where the air is brought to the proper temperature and humidity before entering the incubator.

The incubator itself is one of newest developments in the field. Perfected by the James Manufacturing Co., the "Big J" at Cobb's Pedigreed Chicks, Inc., here, is one of only five installations in the world. It is constructed as an integral part of the building, with three units totaling more than 250,000 egg capacity.

Under the new system, hatching eggs are placed in special plastic containers right on the farm and go directly into the incubators after a special sanitation treatment to remove bacteria and other organisms from the shell surface.

Following an open house at the hatchery, visitors moved to the broad lawn adjacent to the hatchery where the tent and barbecue pits had been erected.

Program Speakers

Following an official welcome to the Siloam Springs area by M. H. "Bill" Simmons, Plus Poultry Co.; and Field Wasson, representing the city's chamber of commerce; Robert C. Cobb, Sr., president of Cobb's Pedigreed Chicks, Inc., spoke briefly on the "revolution" of commercial broiler production.

"Although we are faced with grave over-production on the horizon," he warned his listeners, "we must be careful to preserve our freedom of choice and action.

"We must not turn over our prerogatives to the government so that it may do for us the things we should be doing for ourselves. Marketing controls could be imposed unless we are militant in our maintenance of industry freedoms."

Featured speaker of the afternoon was Marvin W. Melton, president of the Arkansas State Chamber of Commerce, a former legislator and one of the state's leading farmers. Mr. Melton outlined the progress and potential of Arkansas as an industrial and agricultural state—then lauded the growth and stability of the area's burgeoning meat production industry.

Cobb charter certificates were distributed to those who were among the first to purchase Cobb White Rock breeding stock from the new plant by Charles Jones, Cobb sales representative for the area.

The new plant, managed by Harrison S. Arthur, is located at the junction of state highways 68 and 59, about two miles outside Siloam Springs.

DEDICATION FESTIVITIES—Barbecued Arkansas broilers are the center of attraction in this view of the dedication of the new Cobb distribution center at Siloam Springs, Ark. Left to right are Marvin W. Melton, Jonesboro, Ark., featured speaker at the ceremonies; Robert C. Cobb, Sr., president of Cobb's Pedigreed Chicks, Inc., Concord, Mass.; M. H. (Bill) Simmons, Plus Poultry, Inc., Siloam Springs, and John Haid, general manager of the Arkansas Poultry Federation.

Layer Numbers Grow In Arkansas Counties

SPRINGDALE, ARK.—The layer program is increasing in Benton, Madison and Washington counties in northwest Arkansas, according to Don Tyson, who has reported an estimate that there are now 750,000 layers in the tri-county area. About a month earlier, the number totaled 520,000.

Mr. Tyson alone has added 115,000, and the Arbor Acres Farm has increased by 30,000. Since the 1959 egg-marketing measure was passed, the layer program in Arkansas has tripled within a two-year period. In early 1959 Arkansas hens were supplying only 16 to 20% of all eggs used in the state, and by early 1961 the state's flocks of layers were matching the egg needs here.

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Contains the necessary Vitamins, Antibiotics, Amino Acids and Trace Minerals to Vitamin Fortify your own feeds for just a few cents a bag . . . JERSEE VITAL-MIN makes your feeds better, brings you more satisfied customers.
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Contains guaranteed levels of Vitamin A, Vitamin D and Aureomycin. Guaranteed feeding results.
Write today for dealers' sales helps. Jobber and distributor franchises are available!
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MOO--ORE NEWS IN FEEDSTUFFS

VITAMIN A FOR CATTLE—Dr. W. M. Beeson, professor of animal science at Purdue University, is shown here as he reviewed research on the supplemental needs of vitamin A for beef cattle at the Indiana Cattle Feeders Day held at the university. The tables Dr. Beeson is using in the presentation indicate some of the results in vitamin A studies at Purdue (Feedstuffs, April 29, page 1).

Judging Started for PENB, DPI Contest

CHICAGO—The 14th annual National Chicken Cooking Contest has moved into its second phase, under the joint sponsorship of the Poultry & Egg National Board, Chicago, and Delmarva Poultry Industries, Inc.

Thousands of contest entries for favorite chicken dishes are now being forwarded from PENB to state chicken cooking contest committees in 22 states and the District of Columbia. Winners in these state contests, plus additional winning entries chosen at large from the remaining 28 states, will compete for prizes and honors in the cook-off at Seaford, Del., June 15-17, where the Delmarva Festival will be staged.

"This year's Chicken Cooking Contest is the most popular one ever held," reports Mrs. Kathryn Bele Niles, PENB's director of home economics. "We are being deluged with exciting recipes for chicken cookery. They attest to the popularity of broiler-fryer chickens—the tender, young birds that weigh 2 to 3 lb."

Competition is divided into three classes. The senior division includes entries from men and women age 18 and over; the junior division is for young cooks under 18; and the outdoor division enables barbecue cooks to compete.

Recipes are scored on originality, simplicity and ease of preparation, completeness of steps used in preparation, suitability of recipe of young chickens, and taste and appearance of the finished dish.

Midnight, April 22, was the deadline of mailing entries in this year's contest. Upon receipt at PENB offices, all entries are screened by staff members and those that qualify are sorted according to state for judging.

First Preliminary Tests

This year, for the first time in the 14-year history of the national contest, 22 states and the District of Columbia are conducting preliminary contests for senior division entrants. Well-known food writers, home economists, chefs and food communications specialists in these 23 areas are selecting the best recipes for local honors. Several states have set up their own cook-offs, where finalists will actually prepare their chicken specialties for the judges. Valuable prizes in cash and merchandise are being awarded the winners in many of the state contests; in addition, all win public recognition as outstanding chicken cooks in their respective states.

Several winners from each state will then be notified that they are eligible to compete in the big National Chicken Cooking Contest at Seaford, Del., June 15-17. Other contestants will be chosen at large from those states not yet holding organized state contests. These entrants, plus competitors for the junior and outdoor divisions, will be selected by a panel of qualified food experts and home economists. Approximately 125 finalists in the senior division alone, will compete for the top national prize—a trip to Europe for two, courtesy of Pan American World Airways. Numerous other prizes of cash, heirloom silver, major appliances, small appliances and barbecue equipment will be awarded in senior, junior and outdoor divisions.

Winners in the 22 states and Washington, D.C. contests will be announced in advance of the national contest dates. Organized competition is being held in: Alaska, Arizona, Connecticut, Delaware, Georgia, Indiana, Iowa, Kentucky, Maine, Maryland, Massachusetts, Michigan, Nebraska, New Jersey, New Hampshire, New York, North Carolina, Pennsylvania, South Carolina, Texas, Vermont, Wisconsin, and Washington, D.C.

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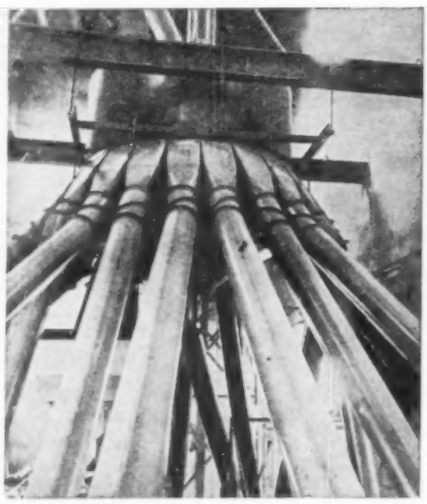

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Now you can own a B.D. moisture tester with automatic shut-off built in the unit—compact and modern. Compare these features:

- Stainless steel construction.
- Safe, low voltage shut off.
- Rheostat control of heat.
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- Any number of units can be obtained and used singly or together as a compact unit . . . more units can be added as needed.
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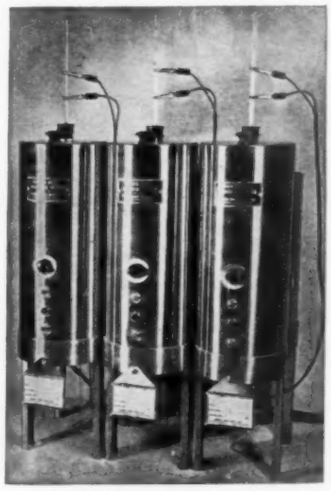

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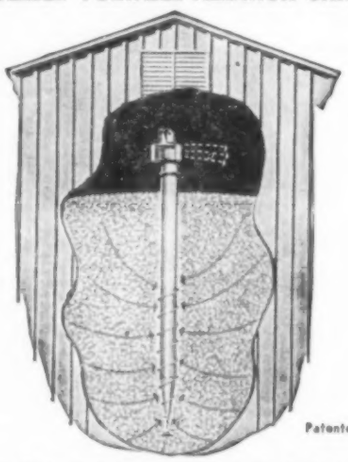

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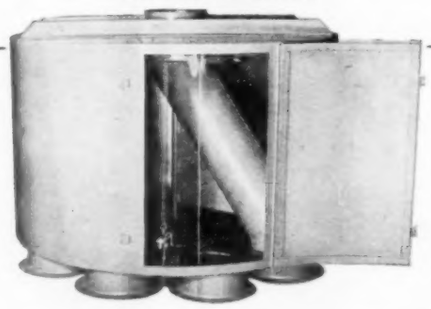

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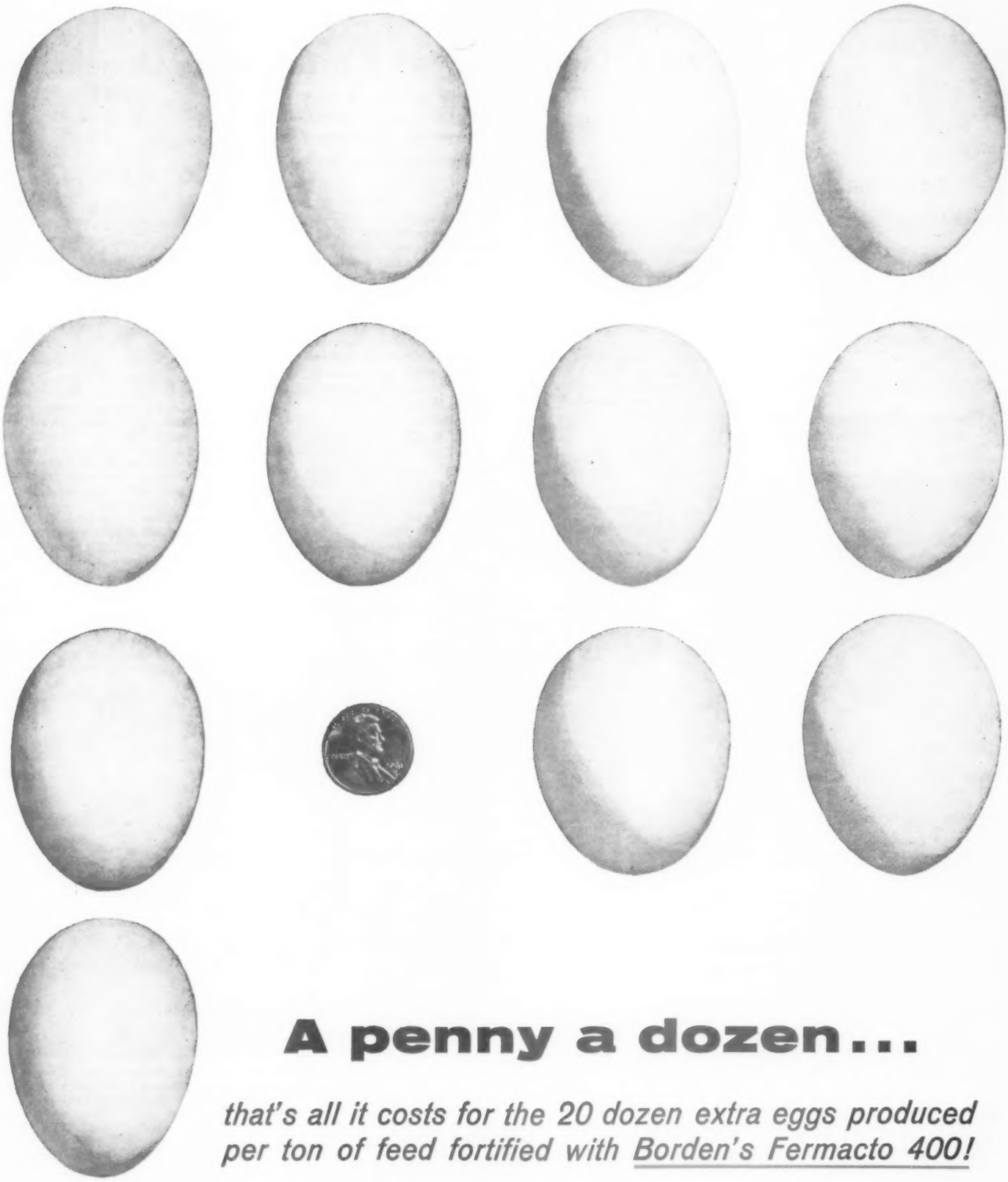

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that's all it costs for the 20 dozen extra eggs produced per ton of feed fortified with Borden's Fermacto 400!

Three consecutive years of field testing have more than demonstrated the value of ®FERMACTO 400 in improving laying rations. Flocks on FERMACTO 400 – Borden's exclusive blend of multiple fermentation factors – showed an average increase of nine eggs per hen (on a hen housed, no culling basis), an extra 20.86 dozen eggs per ton of feed. With eggs at 40¢ a dozen, a gross return of $8.34 was reported. Minus the 20¢ cost of FERMACTO 400 (two pounds/ton of feed), there was an average profit of $8.14 per ton of feed. Whether you augment or replace costly animal proteins or other U.G.F. sources with FERMACTO 400, your growers are assured of consistent and significant boosts in egg production and feed efficiency. Use FERMACTO 400 in your next batch of feed and save dollars in the mill... make dollars on the farm!

Write for a complete set of data and current price quotations. Be sure to ask about our complete, custom service. We can help you build a better feed, more economically, too. Borden's Feed Supplements Division, 350 Madison Avenue, New York 17, N.Y.

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60 seconds that will help you improve operating efficiency.

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You can if you install powerful Permanent Eriez Grate Magnets strategically. Now you can have foolproof magnetic protection where you've never been able to have it before.
- Choose from the most complete selection available . . . wing types, drawer types, multiple bank, rotary type, grates in housings, Rota-Grates in housings, and odd shaped assemblies — in 162 sizes.
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There's an Eriez Permanent Grate Magnet to solve your problems of ferrous contamination . . . yes, even problems which you may not know exist.
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10 NEW PRODUCTS IN THE LAST 5 YEARS

GRADUATE WORK
In Feed Technology at Kansas State University

By Dr. Harry B. Pfost
Department of Flour and Feed Milling Industries

The department of flour and feed milling industries at Kansas State University is in the process of developing an improved and expanded program for students who desire to do graduate work in the field of feed technology. Improved laboratory facilities, which have resulted from the new building program to replace the flour mill which burned in 1957, have provided a stimulus to financial assistance from the state and from industry to equip and utilize these facilities. Until the present time, all of the graduate students have been working in the fields of operations and chemistry; however, the department may be able to offer graduate programs covering the administration aspects of the feed industry within a relatively short time.

The graduate work at either the master's degree or doctor's degree level offers considerable flexibility to the student in planning his course work and the research work which will be used for a thesis. Courses within the department, which the candidate for a degree would not take during his undergraduate work, may, under most conditions, be taken during his graduate program. These courses are described in a previous article in this series published in the May 13 issue of Feedstuffs. One course which is offered for graduate credit only is "The Fundamental Study of Enzymes." As a general rule, most of the students who enroll for graduate work in the department will take considerable course work at the graduate level in either the fields of chemistry and nutrition or in the physical sciences, including engineering. It is felt that candidates for advanced degrees should spend most of their time in course work, to gain a broad basic knowledge of the associated sciences needed by all technical workers in feed technology and that, at a later period, when perhaps this field is more fully developed, additional specialized courses at the graduate level may be offered within the department.

In addition to supervising the work of the graduate students who are enrolled directly within the department of flour and feed milling industries, staff members serve on advisory committees for students working on problems closely allied to the interests of the department. Support for graduate students of other departments, who are working on problems of nutrition, is provided by manufacturing feeds in the pilot mill for these students to use in feeding projects.

Second of a Series

How an institution of higher learning has adopted a professional approach to the training of young men for future positions in the offices, laboratories and mills of the feed industry—and how this thorough preparation program benefits the industry it serves—is told in this series of articles by Dr. Pfost, professor in the department of flour and feed milling industries at Kansas State University.

This article, the second in the series, discusses graduate work in feed technology at Kansas State. The third and final article will concern research. An analysis of the university's undergraduate curriculum in feed technology was presented by Dr. Pfost in the series' first article, which appeared in the May 13 issue of Feedstuffs.
—The Editors.

TABLE 1. Typical Program of Study for the Master's Degree for a Student With Special Interest in Engineering.

Courses:
- Qualities of Feed Ingredients
- Graduate Seminar in Milling Industry
- Research
- Statistical Methods I
- Statistical Methods II
- Electric Circuits and Machines
- Electric Circuits and Machines Lab.
- Electronics and Control
- Electronics and Control Lab.
- Heat and Thermodynamics
- Proposed Thesis Title—"Mechanical Durability of Feed Pellets"

Research in Progress

Research work which is in progress, or which has recently been done, by graduate students in the department in connection with their thesis work, includes work in the field of mixing efficiency, grinding and pelleting. Specific graduate projects which are presently being carried out are as follows:

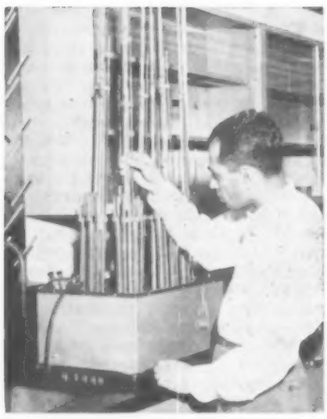
One project continuing into its third year is "A Fundamental Study of Hammermill Grinding"; the project is presently concerned with the effect of speed, hammer width, screen size, grain moisture, type of grain, air flow through the screen and methods of conveying the ground products. This project is being sponsored by the Prater Pulverizer Co. and is being directed by the author.

One graduate student is engaged on a project to study methods of evaluating pellet durability and laboratory control tests which may be used to predict how well pellets will resist breakage during handling. It is felt that this project is of fundamental importance to future pelleting research work in order that results of pelleting research can be accurately and significantly reported. This

The above shown graduate study facilities are now available through expansion of the feed technology facilities. Each student is provided with a desk and book space in the graduate room or in the laboratory where research work is done.

Graduate student Carl Stevens is shown changing hammers on an experimental hammermill used to test hammer design, peripheral speeds and grinding efficiency.

Testing of pellet handling durability is being done with the model system shown. Lee Young, a recent graduate who is continuing his studies, is responsible for this work.



Graduate student Muhammad Akram from Pakistan is shown in one of several new laboratories now being used by the department of feed technology. He is measuring starch gelatinization that occurs in feeds during the pelleting process.

work is being continued on a part of the funds provided by the Sprout-Waldron Research Foundation. A major part of the work by the same graduate student includes an investigation of the effect of colloidal materials in binding feed pellets which is being supported under a grant from the Soft Phosphate Research Institute.

As a part of a program aimed at studying the basic changes which occur due to processing, one graduate student is studying the effect of pressure on pure starches and ground grains when used as a feed ingredient for growing chicks. This is a part of a major research project covering the effect of processing on chemical and biological changes in starches. It is directed by Dr. Waldon Hastings.

A typical program of study for a graduate student working toward his master's degree is shown in Table 1. This program can be completed during one calendar year, if the student is studying full time. The student whose program is shown holds a graduate research assistantship and plans to be engaged in his graduate program for one full year plus one semester. Work toward a doctor of philosophy degree in feed technology can be arranged. It would include considerable course work in either physical or chemical sciences, and research work in any area the student might desire to study can be arranged.

Since the department is unique in the U.S., programs of study will be kept flexible in order that students who transfer from other fields at other institutions may find it possible to enroll and complete graduate work within reasonable time. Other fields of undergraduate work from which students might transfer include animal nutrition, biochemistry, agricultural or mechanical engineering, etc. Students who transfer from these outside fields will probably have gained sufficient knowledge in fields closely allied to feed technology so that a considerable part of their course work could be carried within the department of feed technology, whereas graduates of this department will normally carry most of their course work outside the department. The rather limited number of men who have completed graduate work in feed technology has not provided a large enough sample to state definitely just where they may be employed most profitably within the feed industry; it is anticipated that such graduates would be engaged in research and development in nutrition, process development and equipment design.

Many industries find it desirable, and profitable, to encourage young employees to continue their education toward advanced degrees by part-time study. This is being encouraged by many metropolitan colleges and universities which offer a wide variety of courses in evening class periods; these courses are, however, limited to more common professional fields. As the feed industry develops in its need for more highly trained technical personnel, some of this demand will probably be met by the employer encouraging his qualified personnel to return to college for additional study. This department would like to encourage this practice, and the staff would be happy to discuss the possibilities of transfer of credits, the use of facilities to carry out research programs of interest to the company and its participating employees, or any other possible ways which will help provide the feed industry with more highly trained personnel.

Sales Manager Named

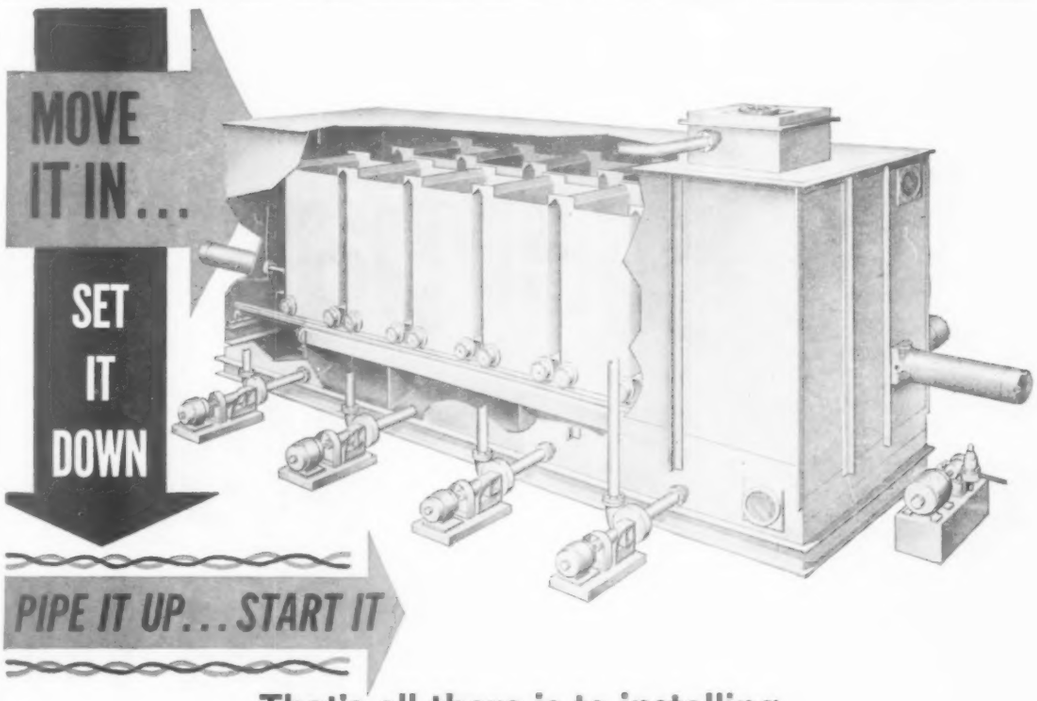
CHICAGO—Bill Jernigan has been appointed general sales manager of Myzon Laboratories, according to announcement by Dr. Harold E. Downing, executive vice president and general manager of the firm.

Mr. Jernigan comes to Myzon with 13 years experience in the pharmaceutical and biological field. He was, for the past four years, field sales manager for the Haver-Lockhart division of Cutter Laboratories, in charge of recruiting, developing and training of its sales force, planning sales and merchandising programs and responsible for the full line supervision of the sales department and distributor sales.

"And what makes you think he was mad because you insisted he deliver it before sunrise?"

PLAN NEW FEED MILL

ROCKY, OKLA.—Members of the Farmers Cooperative Grain & Supply Co. here voted recently to build a new feed mill.



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MANAGEMENT MYOPIA

Marketing myopia—failure to see that marketing means adjusting the product to the market rather than the market to the product—is a problem. But there is an even more critical disease—management myopia—failure to see that there is any need at all for marketing, in the sense of purposeful planned action.

By Edward G. Bursk
Editor, Harvard Business Review

The phrase coined by Theodore Levitt—"marketing myopia"—has gained a great deal of currency since he started it on its merry way—or, to some, maddening way—in the July-August issue of Harvard Business Review, last year. I believe we have received letters from the president of every railroad in the country, and most of the oil companies, either vituperating Mr. Levitt's idea or—and this is the mildest they get—saying it's true about every other industry, or even every other railroad, but not theirs!

Mr. Levitt, of course, addresses himself to the problem of managers who, in their marketing, distributing, selling efforts, think they are selling a product (like railroad trains on tracks) rather than the service for which consumers buy the product (like transportation), or which they signify, by spending their dollars, they want more than some other service or satisfaction provided by other products. People don't buy beds for the sake of beds, but for the sake of what they can do in beds—like sleeping (so you don't misunderstand). Manufacturers don't buy machinery for the sake of machinery, but for the sake of what they can do with it—like making something to sell at a profit. Even farmers don't buy feed for the sake of feed but for what it enables them to do—like making their chickens and their cattle grow.

Mr. Levitt goes on, of course, to the more subtle problem of what these same marketing people fail to do because they take for granted that their product is in such demand they are—and will continue to be—in a growth industry, forgetting to look enough closer to see that if some other product served the need of the consumer better, their industry would be on the skids.

Failure to See Need

So far, so good. I buy the idea of marketing myopia 100%—no, 1,000%. But it doesn't go far enough. There is an even more insidious and more critical disease—management myopia. It is not just failure to see that marketing means adjusting the product to the market rather than the market to the product, not just marketing myopia, but failure to see that there is any need for marketing at all, that is, marketing in the sense of purposeful planned action; in other words, management failure to see the value and essentiality of one of its most important roles; so, management myopia, or even stone blindness.

This is particularly serious in view of some trends that are increasingly affecting more and more industries, particularly older industries like yours, but also some of the new glamorous youngsters, like electronics (Notice how fast they're merging to keep ahead of the sheriff—or if not the sheriff literally, that other villain, the stock market, which can be an ogre just as easily as it can be, sometimes, a fairy princess.)

Specifically, there are three significant trends going: (1) automation, (2) statistical decision making and (3) the cost-price squeeze—all three of which affect the big business most, and by the same token make it true that the small business, with its flexibility, can take advantage of them to steal a march on competitors, either the large ones that haven't the same maneuverability, or the small ones that are too obtuse to see the opportunity or too busy crying to do anything about it. Let me explain.

Automation requires a high investment in equipment; that, in turn, involves a firm commitment to produce or perform a large number of the same thing and the result is standardization and loss of flexibility.

Further, the practice of marketing research and other statistical decision making techniques is almost necessary for the large operator, since he cannot afford to miss the mass market, and the seriousness of even a small error in aim will be multiplied by the size of his operations. Yet this again pushes him in the direction of standardization—not just within his own product line, but across his line and the lines of all his large competitors. If 75% of the people prefer peppermint flavor in toothpaste, that is what the large toothpaste manufacturer must put into his product; or if 75% of the people want western programs, that is what the large advertisers must give them on TV. And all his large competitors feel the same pressure. They are dominated by the "averages"; they must make or do the average thing for the average customer.

Cost-Price Squeeze

This situation is "nailed down" by the effect of the cost-price squeeze, not that small companies don't feel

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this too. But the large operator is more likely to be locked into a pattern that the cost-price squeeze keeps him from breaking out of. For example, he may have begun to grow large by having a particular product or service with some distinctive feature that appealed to the market; but as that is imitated by competitors, he begins to imitate his competitors' distinctive products and services too, in order to support the scale of operations he has now built up. And sooner or later, they are all competing with each other on a price or promotional basis, rather than on the basis of the products or services they offer. And they can't stop—can't stop making the cost-price squeeze worse by spending more and more to get the same volume of sales.

More often than not the large operator tries to get out of this bind by adding more and more new items to his line, "me too" products or services that he is not particularly good at, thus diluting his sales effort. Or he starts to sell to his customers' customers, ending up with such scrambled channels of trade that he cannot please any of them or serve them efficiently. The only thing he can do then is try to put on more pressure by spending more money.

All this is not a new phenomenon, but it has never before been so widespread. Never before have so many so-called "growth" industries been trapped by their own growth.

And here is where the marketing myopia compounds the management myopia. Because the only way—that is, the only profitable way—to win out over competition with a product that is not prima facie superior for all and sundry uses, is to market it better. And the only way to market it better is by thinking first of the consumer or buyer and then of how to reach him. Here are two parts of the process:

(1) Actually getting through to him. To take an analogy from telephoning: finding his number, dialing it properly, and getting him to answer.

(2) Persuading him, in the sense of making your product mean more to him so he will buy yours rather than someone else's. Using the same analogy: once you have him on the phone, giving him your message in such a way that he hears it and becomes convinced.

Crucial Factors

The first part of the process may be easier to do, but it is no less easy to overlook and forget. By looking more closely, or more primarily, at the consumer or buyer, you make better decisions on such crucial factors as:

(1) Selecting the prospects that will be most amenable to your product. No, I am going to stop using the word product, and stick to service or satisfaction, which the product provides, or it's nothing. . . . So, selecting prospects that will be most reachable by, and persuadable by, your service. For example, if you have a way of helping small producers or small distributors with their problems, you can often carve a better market for yourself by building on many of them quickly and efficiently, rather than by going after the richer but more difficult and more competitive market of the large boys—or vice versa; it could be either, depending on what you decide your marketing strength is. (Notice I said marketing, not product, not even market—in other words, what you can do best vis-a-vis competitors to reach and to persuade the consumer: marketing, that is, purposeful planned action to affect the market, not just accept it as it is.)

(2) Similarly, by looking primarily at the consumer or buyer, you will write better advertising or create better slogans, appeals and sales presentations. In general you will be

Edward C. Bursk

AUTHOR—The Harvard Business Review, edited by Mr. Bursk, in 1960 carried an article called "Marketing Myopia." It attracted a great deal of attention in the business world. It was referred to by a feed industry executive in Feedstuffs' Outlook Issue and many feed men have read the article written by Theodore Levitt. Subsequently, the editor, Mr. Bursk, appeared on the program of the Midwest Feed Manufacturers Assn. convention, discussing "Management Myopia." Mr. Bursk calls this an "even more insidious and more critical disease" than marketing myopia. He told feed men that it is not just failure to see that marketing means adjusting the product to the market rather than the market to the product, but failure to see that there is any need for marketing at all—that is, marketing in the sense of purposeful planned action. The accompanying article is from Mr. Bursk's talk at the Midwest convention.

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(3) You will also select and train your salesmen better—and/or select and handle distributors better, if you use them.

Forgetting Consumer

Let me give you an example of what not to do which will also illustrate how even the best of us are tempted to make the mistake of forgetting the consumer; in other words, this story is at my expense. It goes back to the days when I was in the wholesale food business by day, and the egg business by night. (We used to candle and pack from 6 p.m. to midnight, so I mean that literally.)

I had bought a carload of peas from a well-known canner. They were slightly substandard—in other words, a little wrinkled and tough—and the canner was not willing to pack under his regular brand. At that time, nationally advertised brands of peas were selling at about $2.25 a case; unadvertised but reasonably good brands were selling at $1.95. I had bought these peas so that, if I could turn them over fast, a price of $1.60 a case was satisfactory. I had a customer out in the country, a successful grocer accustomed to buying in large quantities, who I thought might be a good prospect. After figuring out how I could best approach him and deciding to stake everything on the price appeal, I got in my car and went out to call on him.

When I came into his store, I left the sample can of peas which I had brought with me in the car. As soon as he was free, I started to work with a price of $1.90 (thinking to myself that anything I could get above $1.60 would be "gravy"). Of course, the first question he asked me was, "Where is your sample?" So rather reluctantly, protesting that the name of the canner should be enough for him, I went out to my car to get it. We opened the can; he tasted a few, rolling them around in his mouth in a sort of judicious way, then chewing them rather deliberately. I said, "Pretty good, aren't they?" He countered, "Sort of tough, aren't they?" I said, "Well, not really; and at that price they are a bargain"—or words to that effect. After almost an hour of haggling, we had reached the point where he wouldn't go any higher than $1.60 and I wouldn't go any lower than $1.65. So I sold the carload to him at $1.62½ a case—a whole 2½¢ above the minimum price I had set myself.

And I felt pretty good about my sale. That is, I felt pretty good until he turned toward me, and smiled, and said: "You know, you made a bad mistake. I would have been glad to pay a premium for those peas instead of getting them for a bargain. I have been looking for peas exactly like that for a long time. The farmers that live around here like to cook their peas for a couple of hours, and most of the canned peas you get these days fall apart if you cook them that long."

I'll never forget that experience. Talk about marketing myopia. That was Bursk blindness, Bursk blunder, Bursk bloody-head-but-unbowed. No wonder I escaped to the Harvard Business School, where I can teach others what not to do. I knew the farmers there cooked like that: I just forgot to think about them. Well . . .

Meaningful Service

Then of course there is the other part of the process: making the product—no, the service—mean more to the buyer. Here there are a number of possibilities:

(1) By making it more clearly fit his needs, either because you have selected and highlighted some problem he was not specifically or acutely aware of, or because your service is tailored to fit his existing and conscious problem more directly. This would be new or pinpointed application. What your feed will do may be no more than another's, but if you show him better than your competitor shows him, that it does a particular job, you will be serving him better. This would be stronger, sharper selling.

(2) By giving him more confidence or more hope that it will fit his needs or meet his problem, because either you back it up with more technical or marketing assistance, or simply because you demonstrate better than competitors demonstrate that this product—this service of yours—will in fact do the job. In other words, the demonstration doesn't have to be in and of the product itself, but of what stands in back of it, so to speak, ranging the whole way from a general reputation on your part, through more specific things like quality control or the kind of distributors you have, to the effectiveness which your selling has in making customers feel they have the best for their purpose, anything that makes your service mean more to the buyer.

This is the way that marketing must be creative. Not to take a market for granted, or a product. But to do something active, purposeful, to change the relationship between product and market. This is the way out of Mr. Levitt's "marketing myopia."

Apply this now more broadly; carry it into the whole process of management decision making. Think of it as being two things in particular: forward-looking and risk-taking.

Part of being forward-looking is to ask all the mean questions possible about the past before making a present decision that will affect the future. One of the biggest traps management can fall into is to look at past results and think they prove that a new move won't work, all because the past results are themselves the result of thinking that such a move would not work.

For example, the telephone people used to think rural areas had less potential for extension phones, so they never tried very hard to sell them in such areas. So today the figures indicate how sparse a market the rural areas are for such luxuries —two big mistakes, both logical, both wrong and both expensive. No three mistakes, and I'm sure my friends in the telephone business will forgive me because they themselves are taking valiant steps to avoid such mistakes in the future: (1) in taking past history for granted; (2) in assuming, logically rather than psychologically, that is superficialogically rather than psychologically, that extensions were luxuries, rather than necessities (necessary conveniences for today's minimum standard of decent living) just because you can make yourself heard 5 miles or 500 or 5,000 miles away with one telephone in the home, and (3) in assuming, again with rare sense (instead of common sense), that farmers wouldn't want or need—yes, need—extensions as much as city folk —as if the barn weren't farther from the front hall than the kitchen, and the farmer's teenage daughter wouldn't like to chat with her friends holding the phone in one hand while she milked away with the other!

As for risk-taking, I mean planned

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risk-taking, let me illustrate. Suppose a new product is under consideration. The sales manager says, "Let's plan to manufacture a year's output of 500,000 of these lovely new things that our marketing research shows people will be crazy about." The production manager says, "Oh no, that would be too risky—we shouldn't buy all the new equipment needed—it is better to be on the safe side. Let's plan on 300,000."

What to do? It is not conservative to decide on 300,000 if the probable costs of being wrong on the low side are greater than the probable costs of being wrong on the high side. Conservatism—true conservatism—will go where the risks are least, and it can be on the high side. For if the profit margin per unit is, say $10, then if the engineer is wrong and the company could have sold 500,000 but only made 300,000, the costs are foregone profit to the extent of $2,000,000. If the sales manager is wrong, the costs are maybe capital carrying charges plus a little carryover on inventory expense or stepped up promotion to avoid the need to carry over—maybe only $100,000.

The trouble is, the foregone $2,000,000 never shows up on the books. Joe, the production manager, is patted on the back for getting 300,000 out. But if the company produces 500,000 and Bill, the sales manager, is wrong, by—say 100,000—he gets holy hell, rather unholy hell, for clogging up the warehouse and being so foolish as to think the public would welcome a gimmick like that. Yet his estimate, under the assumed circumstances, is still about $900,000 better than Joe's.

The answer here—the decision, that is, because it's laying the company on the line—is not necessarily 300,000 or 500,000, or even the good old compromise 400,000. The least risky course may be 450,000 and 400,000 is wrong by almost a half-million dollars. But the exact figure is beside the point—the point is that the manager should approach the decision on the basis of: risk is an integral part of marketing. (In fact, that is why marketing has more potential leverage for the company and the economy, and society across the world, than any other business function. This approach to risk-taking is what stretches us, and as a matter of fact it is the only possible explanation of how some men, some companies and some nations seem able to do the impossible of raising themselves by their own bootstrap.) In fact, risk is almost as integral a part of marketing as it is of bridge playing or boat racing. You just don't get the most out of your game unless you go down once in a while, or go over the starting line ahead of the gun. Not that you try to make mistakes, but you plan to get as close to the line as maximizes your percentage of wins, at the risk, the planned risk therefore, of once in a while having to pay a little penalty.

Risk-taking is not new. Planned percentage risk-taking in this sense is. And today's conditions both call for and make possible, such a deliberate, conscious attempt to recognize marketing both as important and, in part just because it is important, as requiring something better than the old slam-bang intuition or trial-and-error, which often was good (then it was called inspiration) but also was often wrong, dead-wrong not percentage-wrong, even though in those days it could be reversed by harder selling (then it was a pound of sweat in the Puritan-Horatio Alger-Khrushchev sense—a yoking of words that demands another whole conference to explain, except that I mean that hard work, luck and strong words no longer are enough).

Right now, I feel that the greatest threat to this planned, deliberate approach to decision making comes from the very tools that should help to make it more fruitful.

New Techniques

It is always a temptation for managers to abdicate the functions of analysis and decision making when some "magical" technique promises to do the work for them. The new techniques we are learning from the mathematical and behavioral sciences do provide a stronger basis of information for understanding situations on which action is to be taken, and more accurate devices for measuring the results of action once it has been taken; but they cannot prescribe action. Moreover, even for those purposes, management itself must think through its problems, formulate its specific needs, and make explicit its purposes. Otherwise, the techniques are likely to be pointless, and only fruitful by accident. So it is good to be reminded that motivation research, with all its ballyhoo, is far from providing the "answers" to everything.

The very existence of limitations adds a positive opportunity. Managers should be glad that they must work with imperfect tools—for then other managers, in competing companies, will face the same impossibility of securing perfect results and the premium will be to those who use the tools more skillfully. Indeed, it is the essence of aggressive management to take up imperfect tools and make them work! And the fact that the availability of new techniques may reduce the range of decision making simply means that in the narrowing area, where judgment and initiative are still needed, the effect of relative degree of skill is magnified, the more costly are the mistakes, and the greater is the edge over competitors gained by correct decisions.

So, as we now turn our attention to the opportunities for serving consumers better than they yet realize they can be served, the clue is that, however valuable the new research techniques may be for purposes of diagnosis, they are inept for decision making. Management still must do the creative part of the marketing job.

Let me stress again that word creative. Isn't that what I've been saying: marketing can and must be creative.

If breeding alone determined the cost...

Arbor Acres Queens would cost as much as any replacements you can buy!

Arbor Acres

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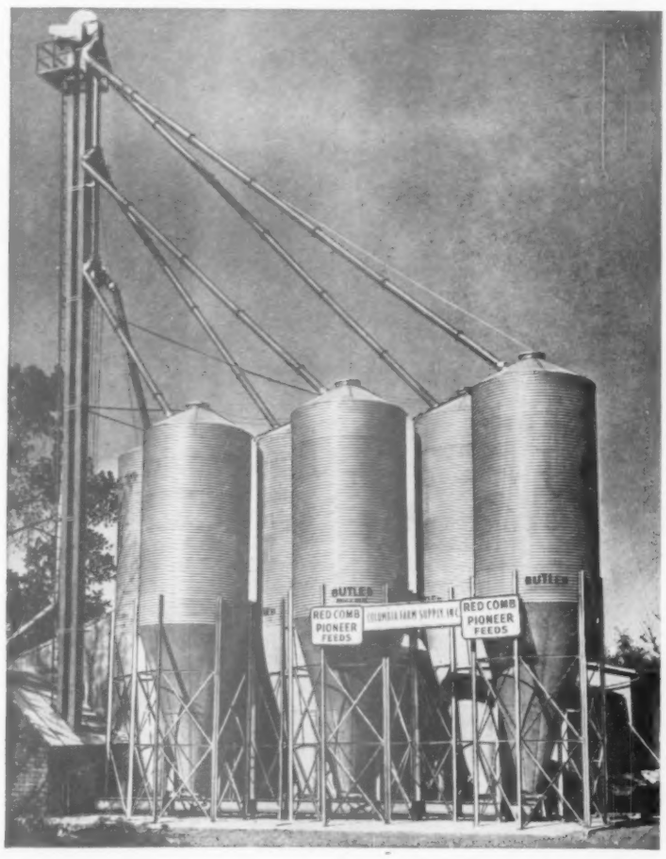

For improved feed handling at the mill, dealer, on the farm

Here's the fast, low-cost way to build new load-out facilities, supplement or finished feed storage. And the new Butler Bulk-O-Matic tank with exclusive Live-Bottom-Action hopper makes feed handling easier... makes storage safer than ever before. This new hopper has no boot to restrict flow or cause contamination. Water seepage is eliminated. Clean-out is fast. And the action of the auger in the hopper stimulates flow.

Farm-size Bulk-O-Matic tanks with this exclusive hopper give you a competitive edge... help you build good will with your best bulk feed customers.

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and that's why it alone can promise so much; and that this same "marketing concept" must be carried into management?

And, as my final bow to a lot of wisdom that somehow got caught up in a few dangerous words like "marketing concept"—dangerous because the words are just a little too neat, too pat for reality, too easy a substitute for the thinking that the wisdom behind them deserves . . . as my final characterization of what I think that wisdom adds up to, let me say that the marketing concept represents an exciting new approach: the disciplining of creativeness, where disciplining means not just bringing creativeness down to earth, or not that at all, but giving creativeness a stronger foundation from which to do the only modern thing—and please excuse my grandiloquence, for it's really just enthusiasm—a stronger foundation, I say, to "blast off" for richer worlds.

'South Afforded Opportunity in Swine'

COLLEGE STATION, TEXAS — Sorghum grain and cottonseed meal afford the swine producer in the South an opportunity for expansion, persons attending the 10th annual Swine Short Course of Texas A&M College heard.

Speaking was Fred Hale, professor in charge of swine, department of animal husbandry.

Mr. Hale advised that sorghum grain, the principal grain available for swine rations in Texas, will contain varying amounts of crude protein. He commented that textbooks list the protein content at 11%, but that one should have a higher-quality ration by figuring 9% crude protein for sorghum grains in place of 10 or 11%.

In wet years or under irrigation, he said, one may find that sorghum grains will contain less than 9% crude protein. "By using 9% crude protein the ration will be similar to one where corn is used for the grain, as corn runs about 9% or less crude protein."

He told persons gathered for the swine event that work at the Texas Agricultural Experiment Station on sorghum grain and cottonseed meal indicates that cottonseed meal-sorghum grain rations for growing fattening pigs can be effectively used with cottonseed meal as the sole protein concentrate when supplemented with the amino acid lysine. He said that both sorghum grain and cottonseed meal are deficient in lysine.

"First, we had to find out how to reduce the gossypol in cottonseed meal and to determine how much gossypol the pig can tolerate," he stated. "Geneticists have recently developed a cotton without gossypol and when this reaches the commercial production stage, we will have a high-quality cottonseed meal for swine feeding. This new meal supplemented with lysine will give the Texas swine producer two excellent swine feeds available for less cost."

Merchandising Change Needed to Stop Decline In Egg Consumption

LAS VEGAS, NEV. — Motivation research expert Ward J. Jenssen says that egg producers must make radical changes in their merchandising concepts to stop the 10-year-old decline in per capita egg consumption.

Dr. Jenssen told 600 delegates to the 37th annual convention of the Pacific Dairy & Poultry Assn. in Las Vegas that they must change packaging, advertising and point-of-purchase merchandising techniques. Otherwise, he warned, consumption would decline at an even more alarming rate.

Dr. Jenssen said that his firm had interviewed 100,000 homemakers in the last 10 years, mapping out changes in food buying habits.

"While suppliers of many other food products have capitalized on this marketing revolution by means of new packaging, product and institutional advertising, and in-store merchandising techniques," he said, "egg suppliers have focused their attention on improving production methods but have overlooked the need to sell the eggs they have produced. As a result, eggs have lost the appeal they once held for the homemaker."

Describing the consumer's present thoughts on eggs, Dr. Jenssen said, "Eggs are seen by shoppers as old-fashioned, lacking in both status and glamour, difficult to prepare and messy to clean up. While eggs formerly were symbolic of 'American breakfast,' they have been replaced in this role by easy-to-serve breakfast cereals, and low caloric diet drinks. Eggs also play less of a part in other family meals due to the growing popularity of convenience foods."

Egg cartons should be redesigned, Dr. Jenssen said, to improve their impulse sale potential.

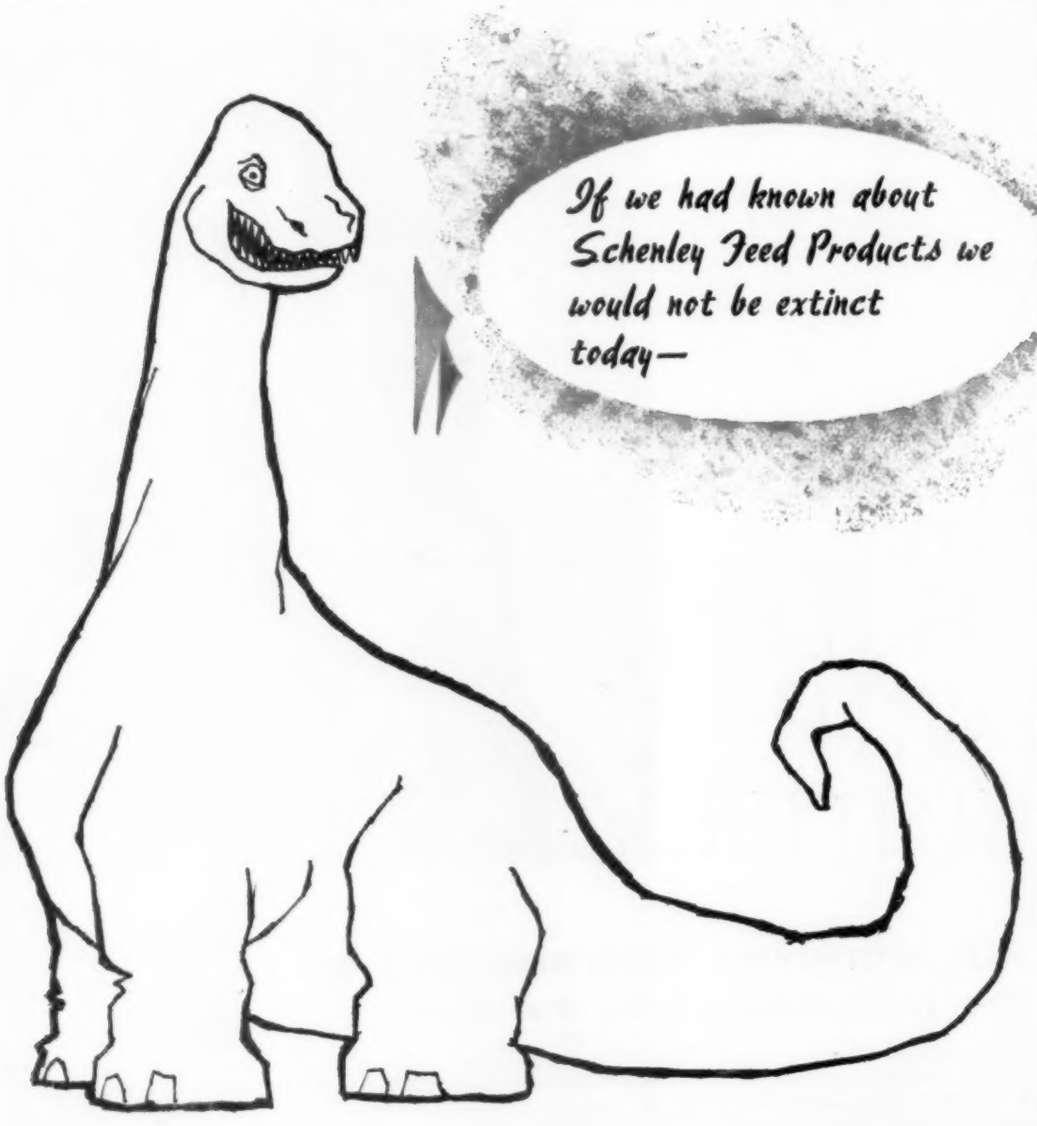
Named Vice President

MILWAUKEE, WIS.—Harry W. Eikenberry has been named vice president for operations of the Froedtert Malt Corp. here. He had been general manager of operations.

Mr. Eikenberry, 37, joined the firm last September after serving as industrial engineer for the International Milling Co., Minneapolis. He had previously been manager of the Buffalo, N.Y., plant of the Pillsbury Co.

LET CONTRACT FOR MILL

MEADE, KANSAS—Meade Cooperative Elevator & Supply Co. here has let a contract for construction of a new feed mill that will cost in excess of $150,000. The new mill will grind, mix and blend molasses and pellet feeds of all kinds. Corn producers will be able to have their crop processed in pellet form for use in feedlots. Contractor is Younglove Construction Co., Sioux City, Iowa.



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— the equivalent of 20 UNITS OF P* for the price of 18.5

Compared to beta tricalcium phosphate —the reference standard—Dynafos has an average biological value of 108. This increase in *usable* phosphorus is directly related to the greater *water-soluble* phosphate content of Dynafos. As a result you can add the equivalent of 20 units of available phosphorus to your feeds at the current cost of chemically guaranteed 18.5% products by using Dynafos. When you phone in your next feed phosphate order — make sure it's IMC Dynafos — today's best quality, best bargain phosphate.

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18.5% DICALCIUM PHOSPHATE
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OR
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ROCK PHOSPHATE
OR
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TO EQUAL THE BIOLOGICALLY AVAILABLE PHOSPHORUS IN ONE POUND OF DYNAFOS.

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DESCRIPTIONS OF NEW AND IMPROVED PRODUCTS AND SERVICES PROVIDED BY MANUFACTURERS AND SUPPLIERS ARE PRESENTED IN BRIEF FORM. FOR ADDITIONAL INFORMATION, PLEASE USE THE ACCOMPANYING COUPON.

No. 7466—Dispenser for Laboratories

A new item for laboratories using the Kjeldahl nitrogen determination test is being marketed by the Pope Testing Laboratories.

This is a patented dispenser which, with one pull of a lever, measures out an accurate amount of the catalyst and potassium sulfate. A micrometer adjustment on the dispenser permits it to be pre-set for quick and accurate discharge.

The dispenser can be purchased, or it is offered also as a free premium with the purchase of specific amounts of prepared Kjeldahl mixtures from the Pope firm.

The mixtures, which are mechanically blended to give free flowing and uniform consistency, can be purchased in standard A.O.A.C. formulas or in special mixes to meet specific requirements.

For additional information, check No. 7466 on the coupon and mail.

No. 7475—Cable Socket for Grain Shovels

A new bail-type cable socket for grain shovels has been put on the market by the Brooks Machine & Mfg. Co. Instead of the customary cable loop through a gripping device, the new Brooks socket locks the cable end in a grip which has been scientifically tested and shown to have a breaking pull well in excess of 7,000 lb. on a ⅜ in. cable without any slippage of the cable in the socket, according to company officials.

The socket is easy to connect by pushing the cable into place and tightening the lock screws which hold it. The socket is said to be smooth and hazard-free with no nuts, bolts, or wires protruding. It is available in 5/16 and ⅜ in. cable sizes.

For additional information, check No. 7475 on the coupon and mail.

No. 7472—Portable Bag Closure

A new model portable bag closure that is said to offer greater capacity and adaptability to a wider range of bag closing applications than previous models, has been introduced by the Dave Fischbein Co.

Designed to perform continuously and dependably even under extremely adverse conditions, the new Fischbein Model D stresses simplicity of operation. Company officials say it can be used efficiently even by totally inexperienced operators to close all types and thicknesses of textile and paper bags.

The greater capacity and increased versatility of the Fischbein Model D broadens the entire field of use for portable bag closures, according to Dave Fischbein, president of the firm. "This new model operates efficiently in many applications in which portable units were heretofore impractical," he said.

The Model D bag closure can be used as a completely portable unit, or in one position with specially designed Fischbein suspension units. It can be operated with a Fischbein taping attachment for applications where tape bound closures are required.

For additional information, check No. 7472 on the coupon and mail.

No. 7474—Bulk Delivery Truck

A new bulk delivery truck uniting the Pamco auger system with a new proven gear driven, rear unloading system is now being marketed by Pamco, Inc. Called the Pamco Bulk-Mate, it is said to unload 1 ton in 2 to 4 minutes.

A full swinging boom auger reaches up 21 ft. to unload. Positive transfer of materials is assured from 9 in. floor auger to 9 in. upright auger to 9 in. boom auger. A 6 in. auger system is available.

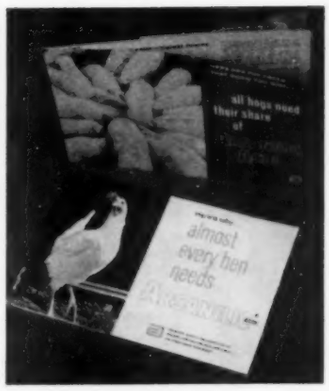
Features of this bulk delivery truck are: all-steel welded body, 300 to 600 cu. ft. capacities, 10 ft. to 20 ft. lengths, any number of compartments are available, smooth power-take-off driven beveled gear system, and control lever adjusts to seven control positions to regulate flow of bulk materials.

For additional information including descriptive literature, check No. 7474 on the coupon and mail.

No. 7473—Arsanilic Acid Booklets

Two new eight-page booklets, published by the chemical marketing division of Abbott Laboratories, supply information to poultrymen and hog raisers about the feed additive arsanilic acid.

The announcement of the booklets calls arsanilic acid "one of the most widely used additives today" in poultry and swine feeds, and it is noted that an increase in feed efficiency of



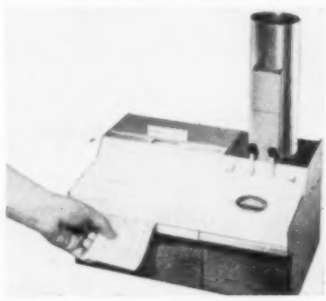
less than one third of 1% pays for the additive.

Both booklets are liberally illustrated. Each contains a detailed question-and-answer section in which many aspects of the use of arsanilic acid in livestock and poultry feeds are discussed.

The booklets are now available in quantity to feed manufacturers, vocational agriculture instructors and livestock and poultry producers. For copies of these booklets, check No. 7473 on the coupon and mail.

No. 7477—Moisture Recorder Leasing

Burrows Equipment Co. has announced that the equipment leasing plan that it made available to its customers several years ago can be used on purchases of the new Burrows moisture recorder.



Under this plan payments can be spread over a three year period, thus conserving working capital.

For additional information, check No. 7477 on the coupon and mail.

No. 7476—Conveyor Belting

Conveyor belting of several types, chief among which is the Black Giant Belt, is now available from the Corns Conveyor Belt Co.

The Black Giant Belt is said to be suited for conveying grains of all types, as well as other things, because of high resistance to abrasive materials. It is described as one belt within another, double stitched for utmost strength and lasting quality. The inner plies are sewed separately after which the outer belt is attached, with a seam in the center, producing a belt with two round edges.

A unique feature of the Black Giant Belt is said to lie in the compound with which it is treated. The compound is not a liquid, but a combination of gums which will not soak into the belt, but which have to be forced in by a mechanical process. This forces the compound into the belt while under tension and when once set, the belt will not go back.

The compound adds strength to the

Send me information on the items marked:

- ☐ No. 7465—Pedestal Initiator
- ☐ No. 7466—Dispenser for Labs.
- ☐ No. 7467—High Speed Grinder
- ☐ No. 7468—Grain Drier Series
- ☐ No. 7469—Pellet Mill
- ☐ No. 7470—Cooker-Extruder
- ☐ No. 7471—Cleaner Fact Sheet
- ☐ No. 7472—Portable Bag Closure
- ☐ No. 7473—Arsanilic Acid Booklets
- ☐ No. 7474—Bulk Delivery Truck
- ☐ No. 7475—Cable Socket
- ☐ No. 7476—Conveyor Belting
- ☐ No. 7477—Moisture Recorder
- ☐ No. 7478—Portable Air Filters

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finished belt and will not harden. Pliability is retained, giving the belt great traction power, permitting looser running without slippage. It also presents a smoother surface to the face of the pulley than conventional belting, the company claims.

Other types of belts produced by the company include the "Rubber-ite" for high or low speed, shock loads, or where flexing over small pulleys is a problem, and the "Strong-Hold" belt, which is made of specially woven duck. This is a stitched belt which makes it impossible to fray at the edges.

"Eureka" is another type belt which is interwoven with copper, zinc, Monel, Nichrome or stainless steel, whichever the situation requires. This belting is said to withstand heavy shock loads.

For additional information, check No. 7476 on the coupon and mail.

No. 7468—Grain Drier Series

Detailed information on the Series 900, 1200 and 1500 Shanzer grain drier models is contained in a four-page bulletin now available from the Shanzer Manufacturing Co.

In addition to dimension sketches and specification tables, the brochure contains information on the equipment's new "safety control center" and screen column design.

For a copy of this bulletin, check No. 7468 on the coupon and mail.

No. 7470—Pressure Cooker-Extruder

Sprout, Waldron & Co., Inc., has announced the availability of an updated Advance Specification Sheet No. 224-A which gives information on the firm's improved pressure cooker-extruder.

This unit is designed to continuously cook or gelatinize starches and cereal grains, and to create an expanded product.

For Advance Specification Sheet No. 224-A, check No. 7470 on the coupon and mail.

No. 7478—Portable Air Filters

A new, two-page bulletin describing and illustrating two new portable air filters for vacuum-type pneumatic rail car unloading of granular and pelletized materials is now available from Fuller Co.

The two-color bulletin tells how both units—the conveying air intake filter and the hatch filter—pass large volumes of free air at only a slight drop in pressure.

The bulletin described design features, advantages, functions and materials of construction. Four drawings illustrate typical installation on rail cars and principal components for each type of filter and assembly.

For a copy of this bulletin, check No. 7478 on the coupon and mail.

No. 7471—Grain Cleaner Fact Sheet

The newest published fact sheet describing the "Clute Grain Cleaner" is now available from the Clute Corp. The brochure explains the Clute Air Separator, a machine that utilizes air to separate particles of differing size, shape and density.

A cut-away diagram illustrates the complete pneumatic grain cleaning process accomplished by the grain cleaner's three basic parts: the cleaning leg which performs the first separation of particles of different density, a fan which sucks air through the system and a cyclone with no moving parts which removes the separated material.

Photographs show that the Clute mobile grain cleaner attaches by conventional means to auto or truck for transporting to job site where it is easily positioned for safe operation.

A mill installation combining Clute stationary cleaners and air conveyor systems illustrates the automated concept of the Clute system which is said to cut manpower costs, speed material handling and allow ground level storage.

This fact sheet cites advantages of the Clute system to both mills and producers, such as efficient removal of penalty dockage, added grain storage life and capacity, riddance of rodent pellets and insects from grain, trouble-free operation and the reduction of moisture.

For a copy of this sheet, check No. 7471 on the coupon and mail.

No. 7467—High Speed Grinder

Announcement of a new high speed grinder for roughages, hay, ear corn and other choking type feeds, has been made by the Prater Pulverizer Co.

Called the Prater Gladiator Grinder, it is said to operate smoothly and efficiently even under shock loads. This GH9 series is available in five combinations to meet any particular need, say company officials.

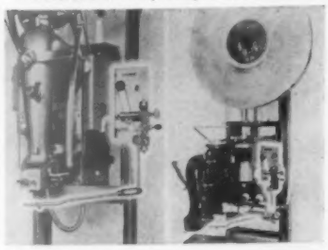
Some of the grinder's features are: all steel structural base, dual or single power, adjustable feed gate control, long lasting hammers and easy maintenance.

For additional information including literature, check No. 7467 on the coupon and mail.

No. 7465—Sewing Pedestal Initiator

The availability of an automatic initiator for the new Richardson sewing pedestal has been announced by the Richardson Scale Co.

It is said that the automatic initiator never needs changing or transferring when sewing heads are



changed because it is mounted on the horizontal slide of the pedestal, not on the sewing head.

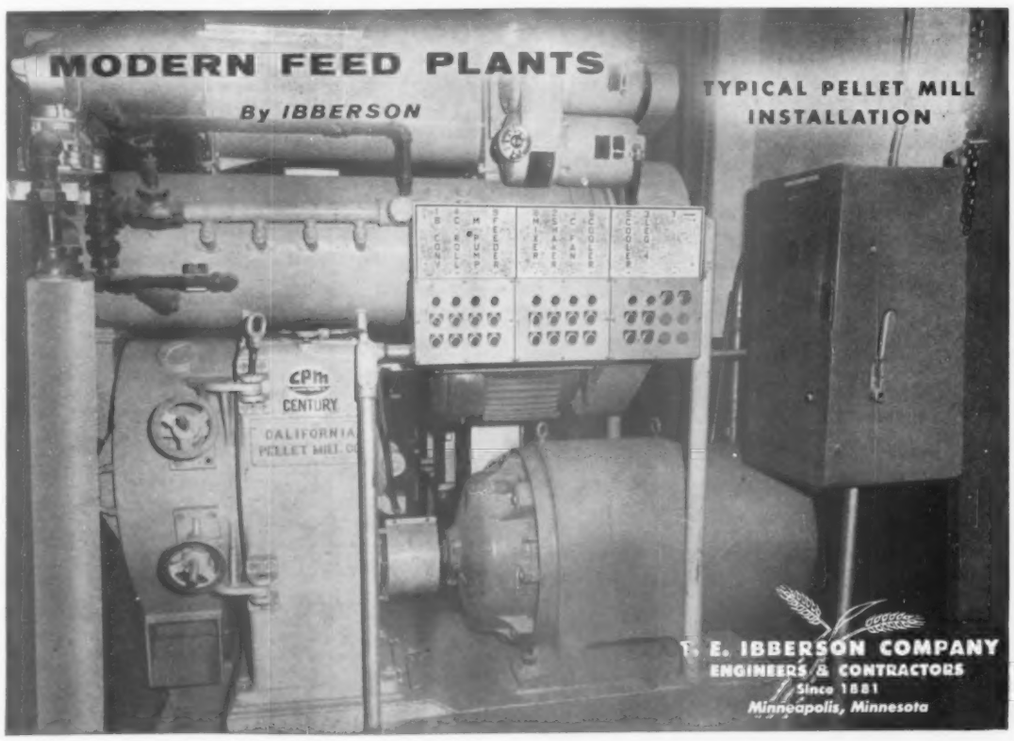
This feature minimizes down time when a thread breaks, or when a different head is required, and also saves thread and tape. Even though a user has two, three or more sewing heads, only one initiator is necessary with the Richardson designed pedestal, as initiator is not integral with head.

The accompanying photo illustrates flexibility, showing sewing head with (right) and without (left) tape sealer. Note initiator remains attached to pedestal frame.

For additional information, check No. 7465 on the coupon and mail.

No. 7469—Pellet Mill

Wenger Mixer Manufacturing has announced the introduction of a new Model B Multi-Duty pellet mill. Dimensions of the new Wenger unit have been trimmed to a minimum by the elimination of the liquid conditioning tank which is standard equip-



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Pfizer
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...produces more gain at less cost than penicillin plus streptomycin.

Have you filed your supplemental N. D. A. for Taomyxin in swine feeds? If not, do it now.

The Chicken Comes First... in Any Quality Egg Program

And the one strain of layer that comes first in all-around egg quality is the H & N Leghorn!

We invite comparison . . . not only in Official Random Sample Test records, but in any quality controlled program where eggs are graded on a breakout basis . . . white, uniform shells of excellent quality . . . a Haugh Unit score well above the required USDA "Fresh Fancy" and "AA" grades even after 13 to 14 months of lay—these are H & N Leghorn eggs!

In 19 official tests ending in 1960, H & N had 24 entries against a total of 520 competing entries. See how H & N compares:

✶ ALBUMEN QUALITY...
H & N averaged 80.1 Haugh Unit value . . . tops over all competitors!

✶ PRODUCTION...
H & N's average hen-housed production was 14 eggs per hen more than the average of *all* competitors.

✶ LIVABILITY...
H & N lived better! They averaged 90.4% hen-housed livability—3.1% better than average of all competitors.

✶ INCOME...
21c more per hen housed than the average of all 520 competing entries.

✶ FEED EFFICIENCY...
H & N Leghorns not only produced 12 more eggs per hen, they did it on an average of .14 pounds less feed per dozen!

Be sure of your program. Order H & N's. For an appointment with an H & N representative to explain the H & N franchised distribution program and how H & N birds are doing in other quality egg programs, please write to us.

HEISDORF & NELSON FARMS, INC.
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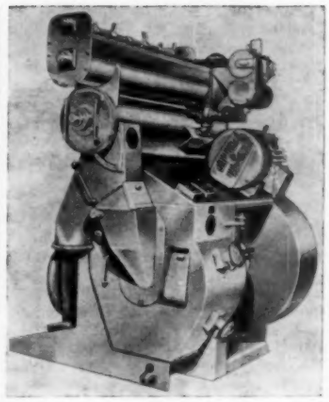

ment on the remainder of the Wenger Multi-Duty line.

The new Model B is said to be capable of producing hard pellets, hi-molasses pellets and liquid blended meal feeds. It is available in capacities ranging from 2 to 14 tons per hour. V-belt drives, heavy-duty bearing design and rugged construction are also features of the new unit, say company officials.

With the introduction of the Model B, it was announced that all Wenger Multi-Duty pellet mills are now equipped with the new wide-mouth Tornado feed cone, engineered for high roughage pellet rations. Wenger claims the Tornado feed cone assembly eliminates plug-ups in the feed spout and die.

For additional information check No. 7469 on the coupon and mail.

Also Available

The following new products have been described in previous issues of Feedstuffs and information about them may still be obtained by jotting the appropriate number of the coupon and forwarding it to Feedstuffs.

No. 7413—Hog feeder, Hawkeye Steel Products, Inc.

No. 7414—Bin flow device, Bin-Dicator Co.

No. 7415—Corn sheller, C. O. Bartlett & Snow Co.

No. 7416—Coccidiosis booklet, Dr. Salsbury's Laboratory.

No. 7417—Portable pneumatic unit, Fuller Co.

No. 7418—Dial indicators, Fairbanks-Morse & Co.

No. 7419—Equipment leasing, financing, Seedburo Equipment Co.

No. 7420—Screw conveyor torque, Sioux Products.

No. 7421—Mobile pelleting unit, Daffin Mfg. Division, Daffin Corporation.

No. 7422—Feed weighing truck, Conveyor Co.

No. 7423—Batch mixer, H. C. Davis Sons' Manufacturing Co.

No. 7424—Pallet bins, Simpson Lumber Co.

No. 7425—Feed flavoring, Flavor Corp. of America.

No. 7426—Motor couplings folder, Link-Belt Co.

No. 7427—Plant safety kit, Towmotor Corp.

No. 7428—Grain storage building, Armco Drainage & Metal Products, Inc.

No. 7429 — Multi-purpose spreader, Iowa Portable Mill Co.

No. 7430—Liquid floor coating, Garland Co.

No. 7431—Mobile mill bulletin, Seco, Inc.

No. 7432 — Poultry house ventilation, L. A. Pockman Mfg. Co.

No. 7433 — Belt conveyor, Finco, Inc.

No. 7434—Roller mill, The Mooers Manufacturing Co.

No. 7435 — Drop bottom mixer, Hayes & Stolz Industrial Manufacturing Co., Inc.

No. 7436—Hand truck, Southeastern Manufacturing Co.

No. 7437—Automated cage equipment, Keen Mfg. Corp.

No. 7438—Egg vending machine, Tobias Enterprises.

No. 7439—Grain roller, The Roskamp Huller Mfg. Co., Inc.

No. 7440—Grain cleaner, Myers-Sherman Co.

No. 7441—Gas-powered lift trucks, Automatic Transportation Co.

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This is my dog. His name is Muggs. He is nine years old and weighs 65 pounds. He is not a ribbon winner or a show dog but he is a wonderful pet and watch dog.

Muggs was nine weeks old (no pedigree) when I got him from a neighbor. I started him right out on RYDE'S FLAKED DOG FOOD mixed into a gruel with a little milk and he has been on RYDE'S FLAKED DOG FOOD ever since. I now feed it dry—just as it comes from the bag.

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Georgia Poultry Men Eye Local Grain to Lower Feed Costs

ATHENS, GA.—The Georgia Poultry Federation, taking stock of the fact that the cost of bringing grain into the state is affecting the price of feed, is casting an eye toward increasing production of grain in the state. A committee has been appointed to explore the possibilities of encouraging farmers to grow more soybeans and other grains.

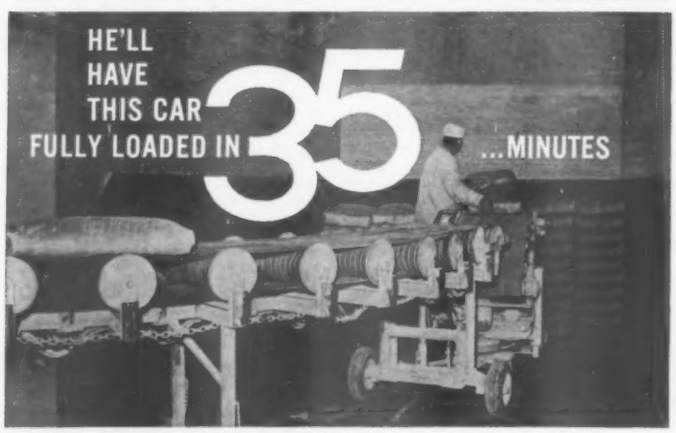
The University of Georgia College of Agriculture is being asked to give its assistance to such a program.

A big proportion of the grain used in making poultry feeds is brought into the state by truck from river ports at Guntersville, Ala., and Chattanooga, thus increasing the price of feed from $2 to $4 per ton over other poultry producing states, the group said.

Both corn and soybeans are short in Georgia, while fairly plentiful in nearby poultry states, the report noted. The demand for soybeans by the industry is 10 times the amount produced in Georgia. Corn production is far below the needs of the broiler people.

The committee, composed of Hulian Hall, Julius Bishop, Ralph Mobley, Red Jordan and Keely Greer, is seeking to point out that the combination of corn and soybeans offers farmers a good deal, since soybeans can be planted on the same acreage after corn has been harvested.

Alabama, one of the fastest growing broiler producing states in the South, last year produced a record yield of 3.5 million bushels of soybeans. Alabama now ranks ninth nationally in the beans, according to Dean Bond, Auburn extension specialist.



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Now—with 200 grams of AUREOMYCIN® and only 20 pounds of MSP (monosodium phosphate) per ton of feed—*you can control losses from blue comb, CRD, synovitis, and deadly coccidiosis.*

Typical results? In some flocks, the formula cut mortality in half—cut production cost 1½¢ per lb.—condemnations up to 86%!

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PF is the company's designation for its special program for formula feed manufacturers.

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Feed manufacturers, emphasizing importance of stress feeding and offering formula feeds containing Aureomycin to meet the need, build volume on all hog feed sales

Vaccination, weaning, worming and handling *needn't* set pigs back, reduce weight gains and lead to outbreaks of enteritis.

And *won't*. Not if these operations are spaced out and pigs get the right kind of feed before and after weaning.

This means stress feeding—use of good formula feeds containing 50 to 100 grams of AUREOMYCIN® per ton.

What manufacturers recommend

Many feed manufacturers are strongly recommending increased use of stress feeds. Here's what they do:

First, they offer a complete starter feed containing 100 grams of AUREOMYCIN per ton as an integral part of their hog feeding programs. This starter feed is fed for at least a week past weaning.

Second, they invite new customers by offering a special conditioner feed containing 50 to 100 grams of AUREOMYCIN per ton to be fed during the critical period. Outstanding results from this conditioner feed persuade producers to go on the manufacturer's complete hog feeding program—and this leads to increased sales volume.

Aureomycin maintains weight gains

The excellent results obtained by feeding AUREOMYCIN through the stresses of weaning and vaccination are clearly shown in the chart on the opposite page. Observations on the vigor, appetite and temperature response of pigs on AUREOMYCIN indicated less reaction to vaccination than was evident in pigs receiving no AUREOMYCIN. Note that pigs fed AUREOMYCIN over the 44-day period averaged approximately 23 pounds more than those not fed AUREOMYCIN.

If you do not at present recommend the use of a starter containing 100 grams of AUREOMYCIN or a conditioner feed containing 50 to 100 grams of AUREOMYCIN, plan to do so. Boost gains and profits for producers and yourself. American Cyanamid Company, Agricultural Division, New York 20, N.Y. ®*AUREOMYCIN is American Cyanamid Company's trademark for chlortetracycline.*

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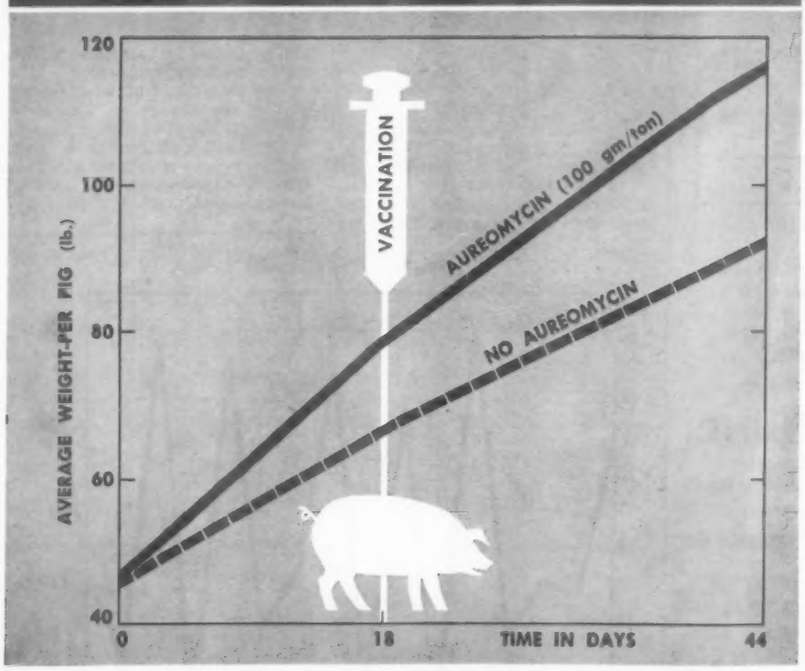
Vaccinating against hog cholera with ROVAC® Hog Cholera Vaccine is an essential step in the Cyanamid Coordinated Feed-Health Program for hogs.

Vaccination against hog cholera always causes an unseen reaction in pigs. The number of white blood cells drops sharply. As far as scientists know at present, this is a necessary part of immunization.

Vaccinated pigs are very susceptible to other infections for a week or so, perhaps because of this white blood cell drop. Pigs on a stress feed containing AUREOMYCIN are protected during this period when their resistance is down. AUREOMYCIN keeps out bacterial infections and increases weight gains. It does not interfere with the production of immunity.



The chart above shows the effect of feeding AUREOMYCIN on the gains of pigs through the stresses of weaning and vaccination. The pigs were 6 to 12 weeks old at the start of the experiment (0 day) and were vaccinated with ROVAC for hog cholera 18 days later. Pigs fed AUREOMYCIN throughout the critical period had less vaccination reaction and gained approximately 23 pounds more. (Based on a study at Ohio Agricultural Experiment Station.)

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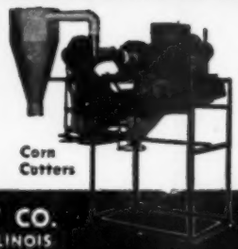

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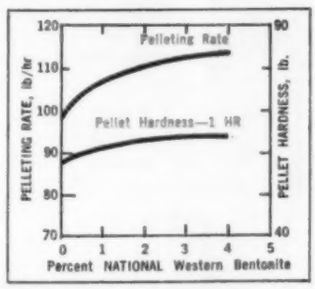
BAROID'S NATIONAL* Western Bentonite increases pellet production and hardness . . . reduces fines

LABORATORY REPORT ON
RANCH CUBE PELLETIZING

Baroid Chemical's Feed Research Program has found that the use of NATIONAL Western Bentonite in ranch cube formulas increases pellet production and hardness while reducing "fines."

The accompanying chart shows that the pelleting rate at maximum pellet mill capacity increases substantially when Baroid's NATIONAL Western is used as a pelleting aid. Note that both pellet hardness and production rate go up as the percentage of bentonite in the ration increases.



Optimum performance is reached at a 2-3% concentration of NATIONAL Western. This amount gives a 13-15% rise in the pelleting rate and an 11-12% increase in pellet hardness. As little as 1% bentonite improves the pelleting rate nearly 10% and raises pellet hardness 8%.

In tests conducted at Baroid Chemicals' Research Laboratories, NATIONAL Western Bentonite replaced an equivalent quantity of milo in 20% protein cattle feed rations. More detailed information on the use of Baroid's NATIONAL Bentonite in ranch cubes can be obtained by mailing the coupon below.

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UP OR DOWN

By Dr. Leonard W. Schruben, Agricultural Economist, Kansas State College

Egg Prices and Feed Sales

Egg production is an important activity on many farms. Prices have been favorable this past winter. With an abundant supply of feed even more egg production apparently is planned in 1961-62. This could very well result in very low prices for eggs this coming winter. Low egg prices do not make cheerful customers for feed dealers.

Profits from egg production do not depend upon the level of egg prices alone but also upon the relation between the price of eggs and the price of feed. Prospects this fall and winter do not look too bright at this time. So get set to help your customers with low-cost-per-dozen-eggs feed formulation. Help them produce quality eggs and find a quality market. There won't be much slack for mistakes and careless marketing. To keep customers you will need to go for more than tonnage sold.

Egg prices seem to work in two-year cycles. First they are up, next year down. This situation leads to variations from year to year in hatchery operations and feed sales.

It now appears 1961-62 will not be a very favorable year compared to 1960-61 when measured on the basis of the egg-feed price ratio. The egg-feed price ratio is the pounds of poultry ration which can be bought with the sale of one dozen eggs. The higher it is, the better the prospect for profits from producing eggs.

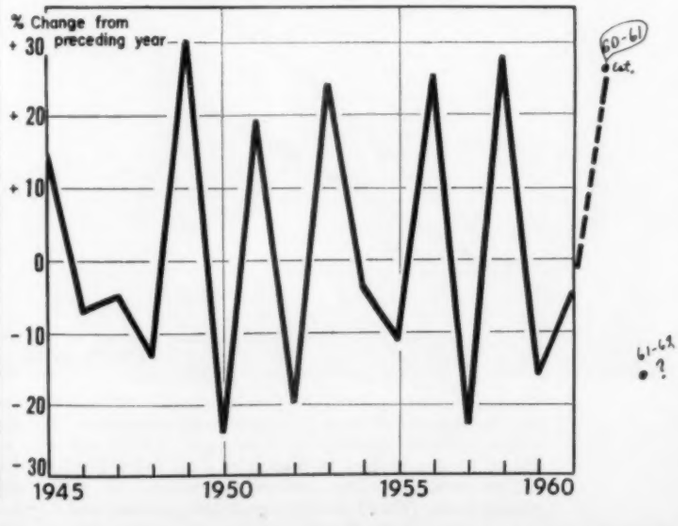
Using prices farmers receive for eggs and pay for feed we have constructed Figure 1. Notice how consistent the ups and downs are from year to year. With few exceptions, prices have shifted from a plus to a minus—and back again from one year to the next. Data in the chart go back to 1945 and only once did the ratio go down two years in a row and only once did it go up two years in a row.

What does this pattern mean for the egg producer this year? Let's take a look at the 1960 hatching-feeding season. With favorable price ratios realized this past winter, farmers were encouraged to expand their laying flocks. This would mean a larger hatch and increased egg production. Reports this spring indicate this is what is happening.

If past patterns are followed, flock size will be increased in the fall of 1961. Egg-feed price ratios may not be as favorable this fall if prices of feed grains are stabilized at higher levels than a year earlier. Prices for eggs could be so low that even the best producers could not make much profit. You can see the dot labeled "61-62" on the chart—maybe this will be close to the ratio this fall.

What is the effect on the egg business of the trend toward more eggs being produced in larger flocks? This trend is accompanied by economic pressure to use feeds of greater economic efficiency. Recent nutritional developments indicate this direction in feeding is continuing. Quality eggs will be necessary if you expect to find a suitable market. This means more specialization even for smaller flocks. So you should get geared to supplying a quality product.

FIGURE 1. Egg-Feed Price Ratio



'Santoquin Emulsion To Reduce Costs'

ST. LOUIS—Costs to alfalfa dehydrators for treating their product with Santoquin brand antioxidant will be reduced between 60 and 70% by introduction of the new water-emulsifiable form of Santoquin, according to announcement by Monsanto Chemical Co.

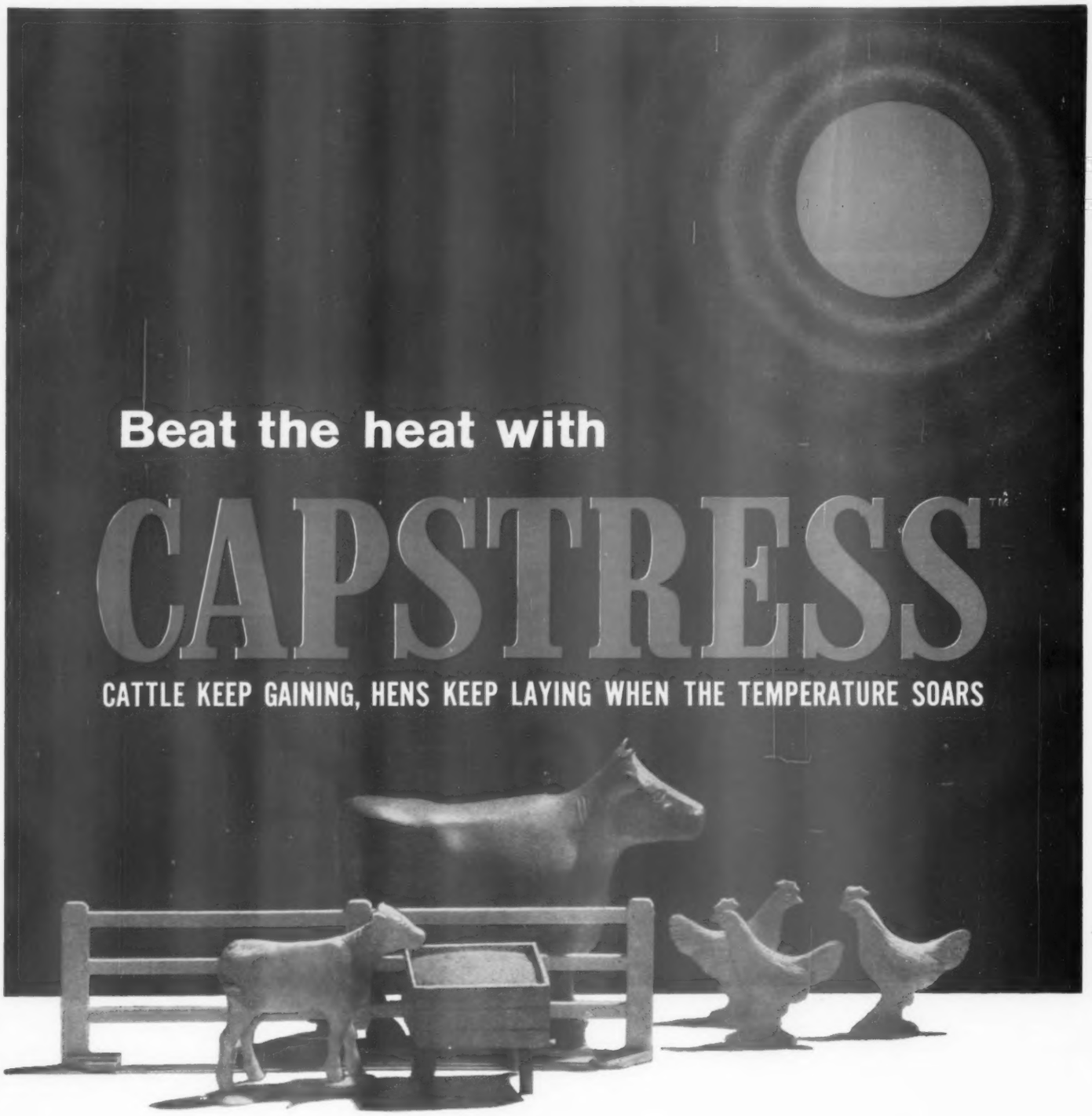
Monsanto says that the new form of Santoquin calls for application in water rather than fat, the conventional carrier, which has represented about four-fifths of the antioxidant's cost to users.

American Dehydrators Assn. announced last week that practically all dehydrated alfalfa sold to feed manufacturers will be treated with Santoquin Emulsion to preserve levels of carotene, vitamins E and K and xanthophyll pigmentation factor (Feedstuffs, May 6).

"To obtain satisfactory distribution with the greatest convenience, the antioxidant can be injected into the dehydrating process at the pelleting stage," according to Ben W. Martin, manager of feed additives sales for Monsanto's Agricultural Chemicals Division.

Monsanto's announcement says, "The new form of Santoquin enables dehydrators to retain 50 to 70% more vitamin A activity because of effective protection of carotenes. Xanthophylls are similarly guarded.

"The antioxidant offers advantages to feed formulators as well as dehydrators. Manufacturers using alfalfa stabilized with Santoquin have a feed ingredient of reliable nutritional value. They can produce a more uniformly potent product."



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GPMMA OFFICERS—C. Robert Myers, left, Myers-Sherman Co., Streator, Ill., is the new president of the Grain Processing Machinery Manufacturers Assn. He was elected to succeed C. N. Hultberg, center, California Pellet Mill Co., Crawfordsville, Ind., at the association's annual meeting in Chicago (Feedstuffs, May 13). At right is Richard L. Crom, Butler Manufacturing Co., Kansas City, newly elected vice president of GPMMA.

TENNESSEE

(Continued from page 10)

grown on grain and minerals have been limited in number.

4. Restricting growing pullets to a certain percentage of the feed consumed by full-fed birds has been studied by many researchers. Pullets so restricted have usually had the smallest body weights at sexual maturity, the highest mortality during the growing period and were oldest at sexual maturity. The laying house performance of Leghorn or Leghorn type pullets has not been markedly affected by this growing method. However, heavy breed pullets grown on this method have usually laid more eggs, laid larger eggs and had less laying house mortality than full-fed birds. Restricted pullets of all breeds have had smaller mature body weights and required less feed in the laying pens than pullets that had been full-fed during the growing period.

5. Diluting diets with high fiber feedstuffs in an attempt to reduce nutrient intake has generally resulted in the birds increasing their total feed intake. Pullets fed the high fiber diets have usually had the smallest body weights at sexual maturity and have usually been the oldest at sexual maturity. This feeding method has not had any marked effect upon laying house performance.

6. Most researchers have discontinued the restricted feeding when the full-fed pullets were sufficiently mature to place in the laying pens. There are indications in the literature that suggest that the restricted groups maintained on their regimen until they reached sexual maturity responded differently from those discontinued earlier.

RESEARCH AND THE POULTRY INDUSTRY—Dr. J. A. Ewing director of the Tennessee Agricultural Experiment Station, pointed out that the poultry industry was making greater use of research information than any other enterprise in agriculture. He stressed that in this field there was little lag from the time research findings were reported and the application of these findings in industry. However, Dr. Ewing noted, each research report should be considered as a progress report so that the results might be interpreted only in the light of current concepts. As concepts change, interpretation of information would change, he said.

Dr. Ewing reviewed results of research conducted by workers in Tennessee's poultry department. Some of his comments in this respect follow:

- "Artificial light used at the rate of 14 hours per day with weekly increases of 15 minutes, after the birds are 10 months of age, is as satisfactory a light treatment as any of the other programs studied. However, we do not have all the answers and other treatments are being studied.
- "It has been found that chicks grown in conventional brooder houses grow as well as those grown in a solar or windowless house. The temperature variation found in the conventional house may be more desirable than the more uniform temperatures found in the windowless house, when measured in terms of broiler growth.
- "It requires more than a 10% restriction in feed intake to delay age at first egg when birds were restricted from the time they were 8 weeks of age to 26 weeks of age. The initial egg size of restricted pullets was greater than the non-restricted.
- "A diet for laying hens containing 13% protein was as satisfactory as one containing 17% protein when the proper level of energy was provided.
- "The use of nf-180 makes it more difficult if not impossible to identify chickens which carry pullorum disease.
- "At least 6.5 mg. of xanthophyll is required in broiler diets for desirable pigmentation.
- "A desirable starting diet for broilers should contain approximately 25% protein with approximately 950 calories of productive energy per pound of feed.
- "Compounds that react much like female hormones, that is estrogenic compounds, improve the finish of broilers.
- "Corn that has been heated or is damaged by mold may be as satisfactory to include in broiler diets as No. 2 yellow corn. It is desirable to supplement damaged corn with added xanthophyll. A safe practice is to feed a few chicks damaged corn before feeding it to large numbers."

RELATIONSHIP OF NUTRITION TO HEALTH—Dr. Bletner made the following statements in his discussion of the relationship of nutrition to health:

If an animal is to be maintained in a healthy and productive condition, it must be supplied a diet complete in all nutrients. The various nutritional diseases result from a deficiency condition or an imbalance of nutrients. Prevention of nutritional diseases is not difficult, but they do appear in commercial poultry production.

Perhaps that most commonly seen deficiency diseases are rickets, vitamin K deficiency and riboflavin deficiency.

Certain management conditions and diseases appear to increase the requirements for certain nutrients. A higher level of vitamin A may be needed when the flock is infected with capillaria worms, while a higher level of vitamin K may be helpful in reducing mortality from cecal coccidiosis.

It should be noted that feeding of high levels of vitamins, minerals and other nutrients may have undesirable effects on the performance of the birds or on the birds themselves. High levels of vitamin A have been reported to have a bleaching effect on the skin of broilers and on yolk color.

Toxic substances are known to occur in natural feedstuffs. Often these merely retard growth or reduce egg production. Such substances are found in uncooked soybeans, alfalfa meal, linseed oil meal and rapeseed oil meal. The minerals fluorine, selenium and magnesium may be present in sufficient quantities to be toxic to poultry. Certain plant seeds are toxic to poultry, particularly corn cockle and certain species of crotalaria.

A few years ago a few lots of fat used in poultry diets were toxic, the exact cause of which has not been completely identified. Recently, seed grains treated with various fungicides have been shown to be toxic as well as grains treated with fumigants, particularly ethylene bromide.

At the University of Tennessee, the use of heat and mold damaged corn in broiler diets has reduced the average weight gains of chicks in only one study while another sample of damaged corn actually stimulated growth. Damaged corn does appear to have a detrimental effect upon pigmentation in broilers.

DRUG USES AND ABUSES—Dr. Bletner emphasized the importance of administering drugs according to the manufacturer's instruction. He said this is necessary "to get the most out of each drug dollar."

"Many drugs may carry the same toxic component and yet be different compounds and be used for different purposes. When two such drugs are used in the same feed, the effect is much the same as increasing the level of one of them. The toxic components are considered to include arsenic and free nitro (NO_3) groups."

TRANQUILIZERS—Of the two groups of tranquilizers—drugs which have a quieting effect on hypertension, anxiety and tension—used most widely in human medicine, reserpine appears to be more effective than chlorpromazine when applied to poultry, according to Dr. H. V. Shirley, Jr., and Dr. R. L. Tugwell.

They reported that tranquilizers have been used in the poultry industry for a number of reasons: Better growth, better egg production, to protect against the stresses of temperature and crowding and to aid in the control of certain cardiovascular diseases.

They said considerable deviation between experimenters has been encountered in the use of tranquilizers for growth stimulation. In a study at the University of Tennessee (unpublished), reserpine appeared to result in a greater growth rate of broiler chicks. This was true when the birds were provided with 0.5, 0.75, and 1.0 sq. ft. floor space each.

"In a study involving 800 cockerels (Drye et al., 1959), reserpine did not appear to have any effect on growth, feed consumption, mortality, or social conduct," Drs. Shirley and Tugwell said. "While no positive response to reserpine was secured with a slow growing White Leghorn strain, a more rapid growing broiler straincross exhibited marked growth response to a low level of reserpine but only with female chicks (Carlson, 1959). Slight increases in growth were reported in experiments with White Leghorn chicks but not with New Hampshire chicks when chlorpromazine was fed. Reserpine produced slight gains in Leghorn chicks and turkey poults (Burger et al., 1959).

"In egg production a low level of reserpine supported egg weight and shell quality during periods of relatively high temperatures on less feed; however, these treated birds produced fewer eggs (Gilbreath et al., 1959)."

They noted that the influence of reserpine on the control of dissecting aneurysms (aortic rupture in turkeys) has been reported by a number of workers. (Carlson, 1959, and Renger, 1959). Also, the protective effect of reserpine against high temperature has been demonstrated in laying hens (Weiss, 1959) and in broilers (Burger, 1959).

Due to the lack of agreement of reports on the effects of reserpine on egg production, two experiments were recently conducted at the University of Tennessee.

Drs. Shirley and Tugwell reported that they first tested the effects of Tran-Q (Pfizer) and reserpine on egg production during the summer months. From this trial, no advantage to feeding reserpine was noted.

The second experiment concerned the effects of reserpine on replacement stock which was stressed with heat and crowding during the growing period. "Results showed that the tranquilizer had no effect in protecting the birds from the imposed stresses during growth," they reported. "There was also no difference in egg production between treatments after the birds were placed in the laying house."

THE NORMAL CHICKEN—Dr. J.

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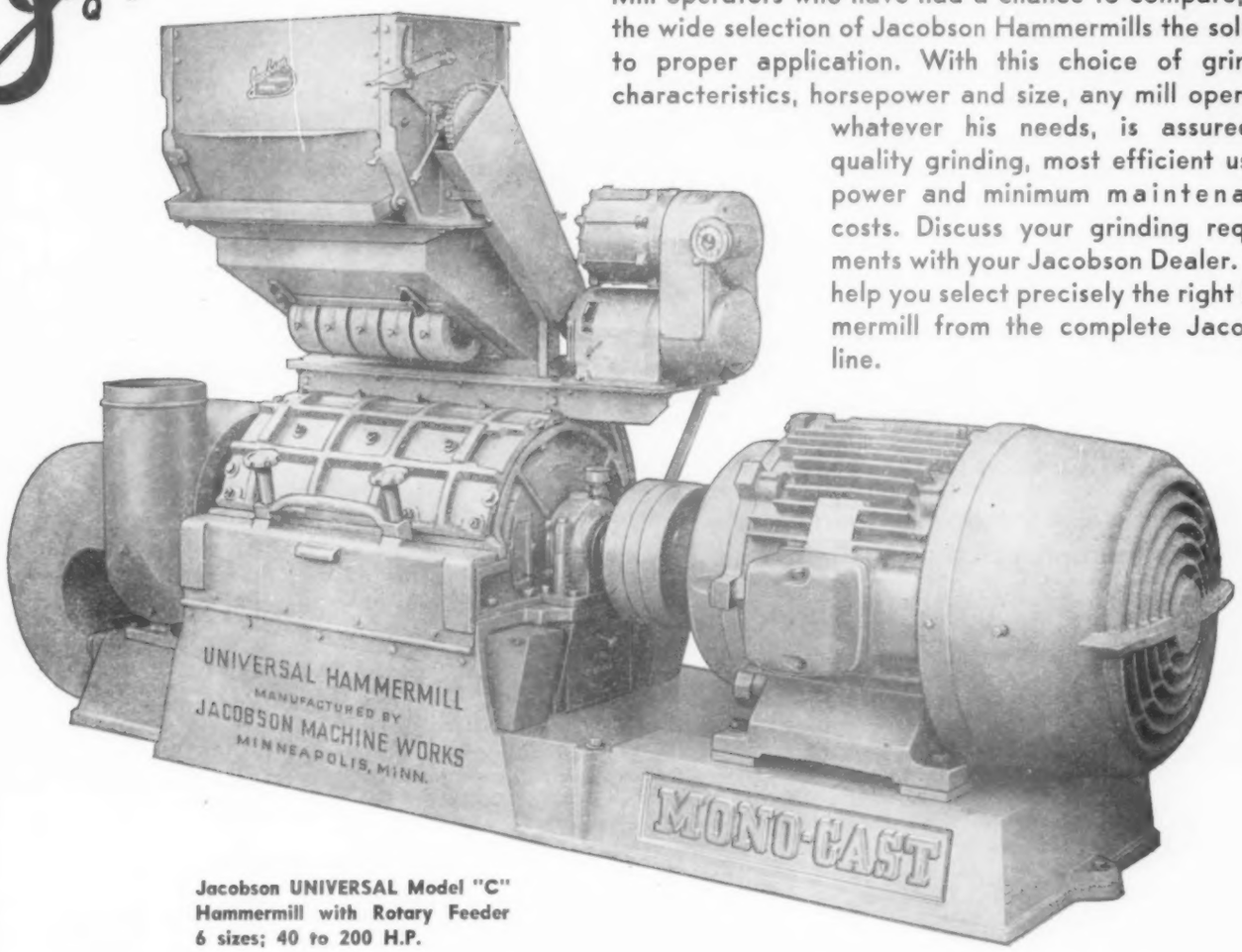

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HOG MEETING — A series of dealer meetings to introduce its hog health product line in additional states is being staged by Dr. Salsbury's Laboratories, Charles City, Iowa. Here is a group which attended a meeting at Waseca, Minn. From the left: Art Achilles, Dr. Salsbury's representative; Dale Mummert, Minnesota Lake (Minn.) Farmers Cooperative Elevator Assn.; Dean Fleming, Dean's Specialty Supply, Waseca, Minn.; S. Thornton, Dr. Salsbury's representative; and Lorin E. Stolte, Stolte Grain & Feed, Essig, Minn.

K. Bletner described some of the characteristics of a normal chicken and some of the physical and physiological changes that take place during the bird's lifetime. Some of the important details of these characteristics were summarized as follows:

1. The comb, wattles and face generally should be a bright red except in very young chicks. In laying hens these parts are a brighter red than in a non-laying hen.

2. The skin, beak and shanks should be a bright yellow color except in the case of white skinned breeds, of yellow-skinned breeds of chickens on feed lacking in xanthophyll, or of hens that have been in production for several months.

3. The liver of a newly-hatched chick is a cadmium yellow color which gradually changes to the burnt sienna brown color of the liver of an adult bird when the chick is between 8 and 14 days of age. The liver of the healthy chick is smooth, with very little, if any, variation in color.

4. The gall bladder of a newly-hatched chick has a dull, greeenish black color, but from the second up to the eleventh day the color may be a pale Montpelier green, after which time the darker color returns.

5. The egg yolk, retained in the body of the chick at hatching, is gradually absorbed, but complete absorption time requires from about 11 to more than 42 days. The color of the yolk material varies from green to yellow.

6. The gizzard lining of a healthy chick is expected to be yellow in color and free of roughened, eroded or ulcerated areas.

7. The lining of the intestine varies in color and structure with the fore part of the intestine having the thicker and the rear portion the thinner walls. Its color is expected to be yellow. No hemorrhages should be expected but discolored areas of undetermined origin do occur in apparently normal birds.

8. The "cecal tonsil" frequently shows slight hemorrhaging.

9. The Bursa of Fabricus attains maximum size at ages varying from 4½ to 12 weeks depending somewhat on the breed of the chicken. Bursa size declines and practically disappears by the time the chicken is ten months old.

10. The thymus gland attains maximum size in the young chick and diminishes with age until only remnants of it may be found in the adult bird.

11. The ovary and oviduct in the sexually mature female fowl are greatly enlarged but regress following cessation of egg production.

A TREATMENT SUMMARY FOR POULTRY DISEASES—The poultry health school program included presentation of the following list of symptoms and treatments for some of the more common poultry diseases. While the list is incomplete, it does contain many drugs presently used, Tennessee researchers said.

Viruses—In general, no treatments. Perhaps for secondary infections and to maintain appetite. For instance, use of antibiotics along with a vaccination program.

Viruses include: Avian leukosis complex, bronchitis, Newcastle, fowl pox, Synovitis.

Blackhead (Protozoan)—Weakness, loss of appetite; yellowish-brown, foamy droppings. Symptoms not as marked as in turkeys.

Drugs: Enheptin, Hepzide, Histostat.

Bluecomb (virus?) Infectious Enteritis — Loss of appetite, dullness, dehydration, whitish diarrhea, some darkening of head parts.

Drugs: Antibiotics.

Fowl Cholera (bacterium) — First sign of disease may be dead birds. Chronic greenish yellow diarrhea, loss of appetite, increased thirst, blue head parts, may be swollen comb or wattles, eyes and facial tissues. May be nasal discharge.

Drugs: Sulfaquinoxaline, nitrofurans, bacitracin+400 gm. Aureomycin for week, 9 months.

Chronic Respiratory Disease (bacterium?)—Sniffling, rattling, sneezing, appetite depressed, diarrhea.

Treatments: Antibotics at high levels (potentiated); water injection dust; antibiotic treatment of eggs—erythromycin for 30 minutes, eggs heated to incubating temperature.

Coccidiosis—Diarrhea, bloody drop-

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"CAREY Ev'r-Flo is tailor made for our automatic system." Paul Blodget, Vice President of the Faultless Milling Company, was speaking. We had asked why Faultless uses CAREY Ev'r-Flo Salt.

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"When we first started this new automated plant, we had one bin which gave us trouble. It was salt. We tried many varieties of mixing salt, but none of them did the job completely. Then we bought our first carload of CAREY Ev'r-Flo Salt.

"In any kind of weather, under all conditions, we have found CAREY Ev'r-Flo does a superb job. In fact, we haven't had a work stoppage due to a hang-up in the salt bin since we began using Ev'r-Flo. We believe CAREY Ev'r-Flo is made for our automatic system, and we're sold on its flowability."

Perhaps CAREY Ev'r-Flo Salt is made for your mixing operation, too. See your CAREY salesman, and ask him to demonstrate Ev'r-Flo flowability in your plant. And ask him, too, about new CAREY Flo-Min Salt — a trace mineralized salt designed for feed mixers, and available in three formulas: Poultry, Swine, and Livestock. Each balances recommended trace minerals in a free-flowing salt ideal for mixing of complete formula feeds.

Prices, CAREY Ev'r-Flo Salt (F.O.B. Hutchinson); bulk, $9.80 per ton; 100 lb. bags, 76c each or $15.20 per ton; 50 lb. bags, 50c each or $20.00 per ton. Call your nearest Carey Sales Office or your Carey representative for freight rates and delivered prices.

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pings, loss in weight, lowered egg production in layers.

Drugs: Amprolium, arzene, nicarbazine, Unistat, Glycamide, Polystat, Bifuran, Zoalene, Cocci-Vac.

Coryza—Discharge from eyes and nostrils, swollen facial tissues, sneezing, coughing, difficult breathing.

Treatments: Sulfathiazole, sulfaquinoxaline, antibiotics.

Hemorrhagic Disease—Pale combs, ruffled feathers, bloody droppings, weakness.

Treatment: Vitamin K.

Avian Infectious Hepatitis—Droopy, listlessness, combs dry, diarrhea, birds become thin and weak, drop in egg production, watery whites.

Treatment: Broad spectrum antibiotics, nitrofurans.

Paratyphoids—May be death with no symptoms, others may show loss of appetite, diarrhea, weakness. Stress (such as chilling) may cause high mortality.

Treatment: Nitrofurans.

Pullorum (bacterium) — Early deaths, huddle, appear chilled, white diarrhea, loss of appetite, mortality may be high. May attack adult flock.

Treatment: Nitrofurans.

Fowl Typhoid—Loss of appetite, increased thirst, green diarrhea, may be sudden deaths.

Treatment: Nitrofurans.

Synovitis (virus)—Loss of appetite, weight, lameness caused by inflamed, swollen joints. Birds set on backs, breast blisters.

Treatment: Aureomycin.

Internal Parasites—Large roundworm: piperazine compounds; capillaria: vitamin A; cecal worm: Phenothiazine.

External Parasites—Lice: nicotine sulfate roost paint, malathion, lindane, DDT; mites: malathion, DDT and lindane, nicotine sulfate and Carbolineum.

Flies — Treatments: commercial "space" sprays: Poison baits, using malathion and Dipterex; Larvicide, Korlan.

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TWO AGGRESSIVE SALESMEN TO SELL paper and textile bags to feed trade. One in Indiana, one in Pennsylvania. Must have car and experience calling on this type trade. Give personal details, references and background. Address Ad No. 6909, Feedstuffs, Minneapolis 40, Minn.

TOP SALES POSITION—GENERAL SALES manager to guide expansion of rapidly expanding and established national sales of volume feed ingredient. Headquartered in Southeast. Prefer mature, aggressive, exceptionally ambitious individual with top sales experience with feed mills. Excellent knowledge of nutrition required. This position offers one of the most lucrative, satisfying, and secure positions in the feed industry. Send detailed resumé in strictest confidence. Address Ad No. 6905, Feedstuffs, Minneapolis 40, Minn.

SHIFT SUPERVISOR — SOYBEAN PROC-essing plant. Excellent opportunity for experienced shift supervisor in modern soybean processing plant, operated by major national company. 25 to 35 age, with previous experience in industrial plant operations. Must have initiative and management ability. Please send complete resumé including education, experience and salary requirements. Send recent photo if available. All replies held in confidence. Our employees know of this ad. Address Ad No. 6900, Feedstuffs, Minneapolis 40, Minn.

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Well established company with long record of consistent growth needs a sales manager in the Mississippi, Arkansas and Tennessee area.

He must have extensive managerial experience in marketing products for the cotton grower, and must be familiar with the entomology and agronomy of the area. A knowledge of prepared feeds will be helpful. Give past employers and income. All replies will be held in confidence.

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Must have extensive experience in sales and service work. Production experience helpful. Willing to relocate in East and travel extensively overseas. Knowledge of Spanish essential. Send complete resume in confidence to Ad No. 6895, Feedstuffs, Minneapolis 40, Minn.

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WHIRLAWAY AIRBLAST CAR LOADERS, cast iron pulleys, new and used feed and elevator equipment. Hagan Mill Machinery, P.O. Box 574, Jefferson City, Mo.

FEED MIXER, 1-TON CAPACITY, GUAR-anteed first-class throughout, 5 H.P. motor drive. Address Ad No. 3479, Feedstuffs, Minneapolis 40, Minn.

CHAMPION MOBILE GRINDER AND mixer mills. Champion Portable Mill Co., 2105 Como Ave. S.E., Minneapolis 14, Minn.

FOR SALE—1957 B & L MOBILE MILL with molasses blender, mounted on 1956 Ford 2 ton chassis, good condition, ideal for second mill, available immediately. Write Box 318, Dubuque, Iowa.

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TRIUMPH 500 CORN SHELLER, USED about three weeks, guaranteed like new, $750. Standard Machinery Corp., 515 North Decatur Street, Montgomery, Ala. Phone: 264-2276.

FOR SALE — USED FAIRBANKS-MORSE truck scales; Jacobson 16 in. hammermill; electric motors from 3 to 60 H.P.; starters, switches and dust collector. Available after June 17, 1961. Write Wayne Feed Supply Co., Inc., Rushville, Ind.

FOR SALE—ENCLOSED MOTORS; RICH-ardson scale; truck scales; hammermills; oat crimpers; horizontal and upright feed mixers; sewing machines; elevator legs; screw conveyors; molasses mixers and pellet mills. J. E. Hagan Mill Machinery. Box 574, Jefferson City, Mo.

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HAMMERMILL—24" STRONG-SCOTT RE-mote screen change, used less than one year, with base and coupling for direct drive. For information contact Jacobson Machine Works, Inc., 1090 Tenth Ave. S.E., Minneapolis 14, Minn.

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AGRICULTURE TEACHER, 27, MAR-ried, master's, desires work with feed industry in northern Illinois or Wisconsin. Box 142, Allerton, Ill.

EXPERIENCED INGREDIENT AND VITA-min premix salesman. Have called on all major feed mills from Maine to South Carolina. Residing in New Jersey. Will travel. Address Ad No. 6859, Feedstuffs, Minneapolis 40, Minn.

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FOR SALE FEED MILL — SHEBOYGAN County, Wisconsin. Profitable. Father and son opportunity. $8,500 plus inventory. Farmers Mercantile and Supply Co., Elkhart Lake, Wis.

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WANTED TO BUY — RICHARDSON Scales, bag closing machines and other good mill, feed and elevator equipment. J. E. Hagan Mill Machinery, Jefferson City, Mo.

NEPPCO Introduces New Business System

TRENTON, N.J.—A series of meetings is underway to introduce the new poultry business system announced by Northeastern Poultry Producers Council (NEPPCO) recently (Feedstuffs, May 13, page 14).

Attending the meetings introducing the new system will be county agents, extension specialists, field service men and poultry leaders in NEPPCO's 14-state area.

NEPPCO says that its new poultry business system is attracting wide interest because it combines a new standardized egg production record with electronic data processing to give the poultry man, poultry management and suppliers all the standard and basic information about each individual flock needed for improving poultry management practices.

Meetings have already been held at the University of New Hampshire, Durham, N.H.; University of Connecticut, Storrs, Conn., and Cornell University, Ithaca, N.Y.

Other meetings are slated as follows: Southern States Cooperative Auditorium, Richmond, Va., May 23, 1:30 p.m.; Lancaster Live Poultry Auction, Lancaster, Pa., May 24, 1:30 p.m., and Agora Hall, Rutgers University, New Brunswick, N.J., May 25, 1:30 p.m. NEPPCO said that a final meeting will be held in Ohio at a date and place to be announced later.

Further information is available from NEPPCO, 10 Rutgers Place, Trenton 8, N.J.

Ohio Plans Beef Cattle Day June 13

COLUMBUS, OHIO — Ohio's beef cattle feeders and consumers will receive a red carpet welcome to the Ohio Agricultural Experiment Station's Beef Cattle Day at Ohio State University, June 13.

Scene of the event will be the new animal science building with its modern meats laboratory on the west campus.

"Breeding and Feeding Beef Cattle to 'Meat' Improvement," is the theme of the day-long program. Station animal scientists, reporting the past year's research, will emphasize the influence breeding and feeding practices have on the development of desirable carcasses.

Carcasses from an experiment crossing Charolais and Hereford beef breeds will be on display, says Dr. Earle Klosterman. Carcasses from a Hereford breeding project as well as from a feeding project also will be exhibited.

Headlining the afternoon speaking assignments are two of the beef industry's outstanding personalities. Lyle V. Springer, executive assistant of the American Angus Assn., will discuss the breeding phase of meat improvement. Talking on feeding practices will be Dr. L. S. Pope, professor of animal husbandry at Oklahoma State University.

Registration and tours of the barns and exhibits open the day's program at 9:30 a.m. EST.

C. E. Graves Retires

WILMINGTON, DEL.—Chester E. Graves, manager of the Palo Alto, Cal., biochemicals and sales district of E. I. du Pont de Nemours and Co. Industrial and Biochemicals Department, will retire July 1 after 32 years with the firm, it has been announced here.

Mr. Graves has represented the firm on the West Coast for 16 years.

Jack R. Nail, export sales manager of the department and formerly in sales work in the West, will return to Palo Alto and assume the duties of district sales manager, the firm said.

Canada's Production Of Eggs, Poultry Off

OTTAWA — Production of both eggs and poultry meat in Canada declined during the year 1960, according to figures (excluding Newfoundland) which will appear in the annual government report "Production of Poultry and Eggs."

Net production of eggs declined 2.0% to 451 million dozen in 1960 from 460 million dozen in 1959. The figures showed that average number of layers on farms declined to an estimated 28.9 million from 29.3 million in the preceding year, while the rate of lay advanced to 195 from 190 eggs per hen.

Egg exports totalled the equivalent of 10.9 million dozen during the year compared to 29.9 million in the preceding year and imports amounted to 1.8 million dozen compared to 2.4 million dozen. Domestic consumption was estimated at 426.8 million dozen versus 418.9 million dozen or a per capita consumption of 24 dozen for both years.

Poultry meat production decreased 6.0% to 472.9 million pounds from 502.8 million pounds in 1959 (eviscerated weight). Production of fowl and chicken meat, accounting for the major part of the total output, declined to 357.9 million pounds from 365.2 million pounds. Output of turkey meat was down to 107.6 million pounds from 130.6 million pounds.

Per capita consumption of poultry meat declined to 27.8 lb. from 30.4 in 1959, according to the figures. Per capita consumption of fowl and chicken meat declined to 20.9 lb. from 22.0 lb. and consumption of turkey meat dropped to 6.4 lb. from 7.9 lb. in 1959.

Denver Area Faces Grain Storage Shortage

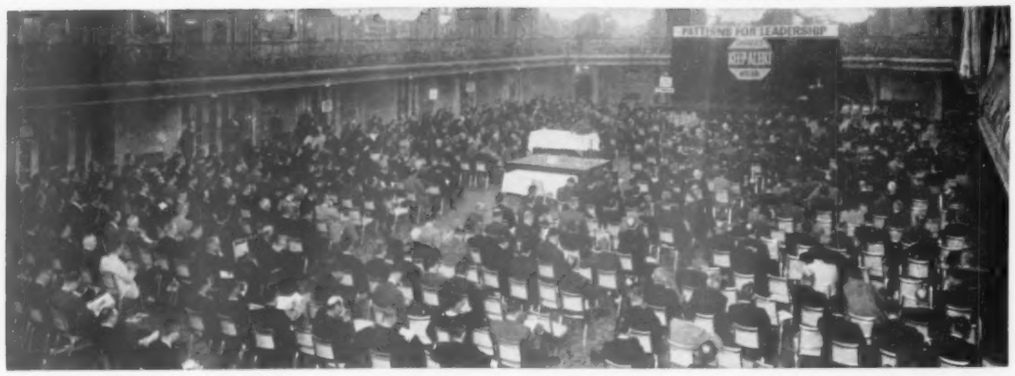
DENVER — The Colorado Grain Advisory Committee said here that the Denver area faces a shortage of grain storage facilities this summer.

Joe Turecek, Byers, Colo., committee chairman, said space for 1961 crops will be "practically nonexistent" if anticipated wheat and barley crops materialize.

Recent surveys show area storage facilities and country elevators have only limited capacity for new grain unless there is a "rather heavy movement of grain, mostly wheat, between now and harvest time," Mr. Turecek said.

Stocks of wheat in April were at an all-time record—66.3 million bushels. Barley on hand totaled 7.5 million bushels.

CHANGES AHEAD—Technical orientation will become most necessary for feed manufacturers to maintain their position in a radical revolution now sweeping the industry, Ernest A. Epps (above) told the American Feed Manufacturers Assn. in Chicago. Mr. Epps, president of the Association of American Feed Control Officials, pointed specifically to increased insight into the importance of nutritional factors, availability of new chemicals and new processing techniques in the industry.



CONVENTION HALL—"Patterns for Leadership . . . Changes Ahead . . . Keep Alert!" These signs made the setting for the opening address by W. E. Glennon, president of the American Feed Manufacturers Assn., during the organization's 53rd annual convention in Chicago May 8-10. (Feedstuffs, May 13) At the rostrum when this picture was taken was Dr. C. B. Ratchford, dean of the University of Missouri's agricultural extension division.

Ontario Feed Event Planned for June 5-8

GUELPH, ONT. — Plans for the third annual feed industry management school at Ontario Agricultural College in Guelph, have been announced by sponsors of the event, the Ontario Retail Feed Dealers Assn., and the departments of agricultural economics and extension education, Ontario Agricultural College.

Slated for June 5-8, the program has been designed to present the most up-to-date and factual information concerning some of the major problems confronting management of local feed and farm supply businesses throughout Ontario.

Areas to be discussed by recognized authorities at the event include "Managing Your Finances," talks pertaining to alternative sources of capital and how to use them to best advantage; and "Serving Your Customers," which will deal with recommended management practices and current price prospects for the various livestock and poultry enterprises.

Other areas of discussion will include "Role and Importance of Your Industry," and "Research Needs in the Feed Industry." More than 20 different talks will be devoted to these four areas during the four-day event.

Registration, which may be done on a daily basis for those unable to attend the complete course, will be held at the college's physical education building. All lectures will be held in the physical education building.

Facilities at the physical education building, including the swimming pool, will be available to all who register for the course.

Advanced registration is available by writing to the department of extension education, Ontario Agricultural College, Guelph, Ont.

EXECUTIVE TRAFFIC COMMITTEE — Freight rate restrictions, eastern rate adjustments and other problems predominated at meetings of the executive traffic committee, American Feed Manufacturers Assn., at the association's convention in Chicago. T. Vernon Hansen, general traffic manager of Cooperative Mills, Inc., was elected chairman of this AFMA committee.

AWARDS FOR SERVICE—"In recognition of outstanding service to animal agriculture through the promotion of improved management, nutrition, breeding and marketing practices," the American Feed Manufacturers Assn. presented the 1960 animal agriculture awards to Herb Plambec (center), farm director, radio station WHO, Des Moines, Iowa; and Farm Journal magazine, accepted by editor Carroll Streeter (right). Richard L. Kathe (left), AFMA director of public relations, made the presentations at the concluding program session of AFMA's 53rd annual convention May 10 in Chicago (Feedstuffs, May 13).

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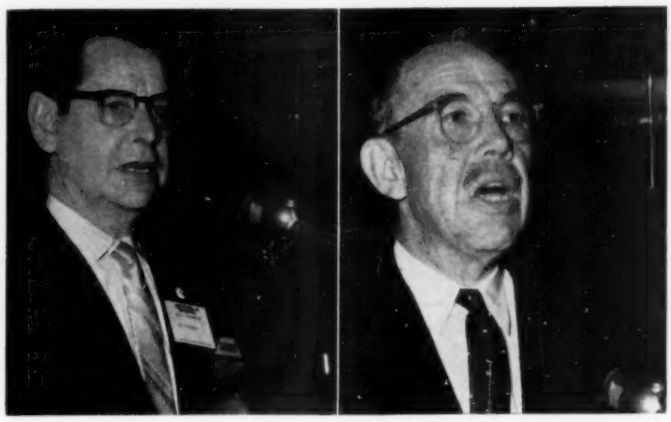
ADDRESS .....
CITY ..... STATE .....

AFMA DISTRIBUTION PANEL—"Who's Who vs. Who's Left in Feed Distribution" was the title of a panel presentation at the 53rd annual convention of American Feed Manufacturers Assn., May 10, 1961 in Chicago. (Feedstuffs, May 13) Panel participants, shown left to right, are: Robert E. Miller (discussed dealer distribution), director of marketing, The Beacon Milling Co.; Dr. R. J. Mutti (on-farm mixing), professor of agricultural economics, University of Illinois; Paul Cory (direct selling), sales manager, The Moorman Mfg. Co., and the panel moderator, Don Butler, vice president, Creative Service Associates.

—AFMA Convention Views—



AFMA PRESIDENT — "Road Maps Are Not Free," W. E. Glennon, president of the American Feed Manufacturers Assn., told attendees at the annual convention of the AFMA in Chicago, May 8-10. One of the prime objectives of the AFMA in a changing agriculture will be to provide "road maps," to keep industry members advised of the proper routes in agricultural advances and developments in the market place.

MAN IN MANAGEMENT—Cut your communications chains; tighten up your organizational charts, and put the man back in management. This paraphrases "The Man in Management"—a thought-provoking, stimulating challenge given the American Feed Manufacturers Assn. by Cameron Hawley, lecturer-author. Mr. Hawley was a featured speaker at the 53rd annual AFMA convention in Chicago, May 8-10.

AFMA BOARD OF DIRECTORS—Members of the board of directors of the American Feed Manufacturers Assn. are shown above during the 53rd annual convention of the AFMA in Chicago, May 8-10.

Back row, left to right: I. S. Riggs, The Quaker Oats Co.; Allen Schreiber, Schreiber Mills, Inc.; Claude I. Carter, Alabama Flour Mills; Ward R. Finch, Eastern States Farmers Exchange; Frank T. Heffelfinger, H. F. H. Peavey & Co.; Charles H. Riley, Cooperative GLF Exchange; G. A. Ensminger, Albers Milling Co.; Dr. Walter A. Glista, Wirthmore Feeds, Inc.; Nelson Poisby, The Yantic Grain & Products Co.; Dr. C. K. Laurent, Marbut Milling Co.

Center row, left to right: C. S. Langen, Moorman Manufacturing Co.; C. W. Tilson, Central Carolina Farmers Exchange; R. E. Wendland, Wendland's Farm Products, Inc.; E. F. Dickey, Honeggers' & Co.; Steele Wright, Texas Farm Products Co.; Dr. Paul E. Newman, Beacon Milling Co.; Henry C. Tilford, Jr., Dixie Grain Co.; Dwight Dannen, Dannen Mills, Inc.; Harry C. Johnson, Montana Flour Mills Co.; Eugene E. Woolley, General Mills, Inc.

Front row, left to right: Ogden P. Confer, Hubbard Milling Co.; Dr. John C. Hammond, O. A. Newton & Son Co.; Harry Truax, Farm Bureau Milling Co.; Guy L. Cooper, Jr., The O. A. Cooper Co.; Dean McNeal, The Pillsbury Co.; Herman (Jack) Jensen, Golden Sun Milling Co.; James C. North, Nutrena Mills, Inc.; Edward E. Woolman, Hales & Hunter Co., and H. Langdon Robinson, Faultless Milling Co. Dr. J. L. Krider, McMillen Feed Mills, a three-year nominee, is on a European tour with the Soybean Council, and was unable to attend the AFMA convention.

AFMA SPEAKER—"All Join Hands and Circle Left" was the title of a talk by Dr. W. Lyle Fitzgerald, The Quaker Oats Co., before the 53rd annual convention of American Feed Manufacturers Assn. May 10 in Chicago. (Feedstuffs, May 13) His address forecast likely effects of federal farm legislation upon the feed industry and animal agriculture.

NUTRITION COUNCIL EXECUTIVE GROUP—The executive committee of the Nutrition Council of the American Feed Manufacturers Assn. was elected during the 53rd AFMA convention in Chicago. Back row, left to right, are: Dr. H. L. Wilcke, Ralston Purina Co.; James Sutherland, Philip R. Park, Inc.; Dr. A. Allen Heidebrecht, Paymaster Feeds; E. D. Koon, Spartan Grain & Mill Co., and Dr. W. R. Graham, Jr., the Quaker Oats Co. From left in front row are Lee H. Boyd, AFMA director of feed control and nutrition; Dr. J. Wesley Nelson, Nutrena Mills, Inc.; Thomas A. King, Illinois Farm Supply Co., and Dr. W. W. Cravens, McMillen Feed Mills, Inc. Not present was Everett A. Blasing, The Pillsbury Co.

NUTRITION AWARDS—Recognition for outstanding accomplishments in the field of agricultural science was given during the convention of the American Feed Manufacturers Assn. in Chicago. Recipients of the AFMA Nutrition Council $1,000 Awards are shown above with Dr. W. W. Cravens, chairman (left) making the plaque presentations to (left to right): Dr. B. Connor Johnson, University of Illinois; Dr. F. Howard Kratzer, University of California, Davis, and Dr. Wesley A. Hardison, Virginia Polytechnic Institute.

MISSOURI

(Continued from page 4)

more intimate contact with their respective federal and state congressmen and senators, their individual newspaper editors, their local radio, TV and related commentators and others, to promote the idea of the value of free enterprise.

GRAIN, FEED INDUSTRY TRANSITION—What today's changing agriculture means to feed and grain men was included in a talk by Clifton B. Luttrell, manager and agricultural economist, research department, Federal Reserve Bank, St. Louis.

In his talk Mr. Luttrell said that commercial farmers of the future, who will be managing enterprises with assets of $200,000 to $500,000, will probably demand different types of purchasing and selling arrangements from typical farmers of the past.

"In selling those commodities which are not under government price supports, they will have greater bargaining power either as individuals or tightly knit associations that specialize in producing a few commodities.

"It is likely that more prices with both dealers in farm products and suppliers of production items will be negotiated as one factory negotiates with another today," he said.

Mr. Luttrell pointed out that "dealers and suppliers will probably be forced to make substantial price differentials in somewhat the same manner as credit agencies. Farmers may be similarly classified for product and supply pricing purposes. The large, highly specialized operators, who produce high-grade commodities, will rate the prime price; at the lower end of the scale will fall the part-time and remaining small general farmers whose higher costs of handling and grading will require a greater margin for the dealer.

"Grade, or quality, and price agreements prior to marketing," said Mr. Luttrell, "will probably come into greater use generally as they have been practiced in a few specialized industries. With the smaller number of producers, it is reasonable to expect business methods in agriculture to more nearly approach those used successfully by nonfarm business.

"I believe that these prospective developments point the way to further opportunities if you gear your own operations to take advantage of them. Volume of farm commodities flowing to the market will continue to climb and you are a vital link in the chain that produces the flow. If your operations are as efficient as alternative methods of marketing you should continue to grow as farm output rises. Efficiency in your operation, as in farm production, will continue to be your key to success," he said.

VETERINARY RELATIONS — "Know Your Veterinarian, He is Good for Your Business" was the title of a talk delivered by Jack Kroeck, executive director of the Missouri Veterinary Medical Assn.

Mr. Kroeck discussed the problems that confront the feed man and veterinarian, and the resulting "frustration" that is caused many times among the livestock producers.

"We have our problems, they are here to stay, and we must all cooperate," Mr. Kroeck told the group. He said that the only way to solve many of the problems is to work together and put each group in its proper perspective—"each of us is here to serve the area that we were trained for and are capable of serving in."

Referring to the addition of medicants to feed, Mr. Kroeck said that it is only normal for one group to become upset when another group enters its field. "But I feel the big strain is over," he said.

He advised the group to "never speak derogatorily about someone else that is serving the same client that you are. Always keep in mind that other people are interested in the livestock farmer and seeing that he makes money. I say this to the veterinarian as well as to the feed man."

Noting why the veterinarian is a good man for the feed man to know, Mr. Kroeck said that "the vet helps your business, he sells more feed for you than most realize; he recommends to his clients a well-balanced feeding program; he can tell you of poor credit risks; he can advise you of clients that have poor feeding programs and need your help; he can, in many cases, straighten out unfortunate misunderstandings between the farmer and the feed man, and he can keep you up to date on disease problems that are constantly changing."

By working together, greater livestock efficiency will be attained, which will stimulate livestock production, and more confidence will be generated in both parties, he said.

In closing his talk, Mr. Kroeck advised the group to refrain from diagnosing and treating diseases. "This is a dangerous practice which might lead to serious death loss if the diagnosis is incorrect, or if the wrong treatment is used. Also, it might be a disease that has human implications and should be reported," he declared.

GRAIN, FEED INDUSTRY REPORT — Alvin E. Oliver, executive vice president of the Grain & Feed Dealers National Assn., emphasized to Missouri Grain & Feed Assn. members the progress which the industry has made in its efforts to develop a stronger, better-financed national association.

The association executive reminded the group of the recent hiring of a director of information services, of the appointment of a committee of legislative minutemen, and of the recent convention in Washington, which was well attended by representatives of the industry and members of Congress. He reported on the results of the recent membership expansion project known as "ME" Day which presently has brought in 433 new members.

Mr. Oliver stressed the importance of continuing to broaden the base of the national association. He stated that the trade must be prepared to meet five major changes in the months ahead. "Adjustment of the grain storage to supply, transportation changes, need for growth capital, preservation of the marketing system, and meeting Food and Drug Administration requirements are five of the major areas of concern to the grain industry, and we will face up to them," the association executive said.

If government programs reduce crop production, storage facilities could be greatly in surplus. "In that case," he said, "the government should remove itself from competition with its private citizens and liquidate its bin site locations."

ELECT DIRECTORS—Association members elected three new directors and reelected as many more for new terms. New directors are Robert Jungermann, Old Monroe; W. A. Burns, Savanna, and Henry Summers, Fayette. Reelected were Carl Godwin, Dexter; Jim Woody, Springfield, and Carl Halferty, Plattsburg.

Other directors serving unexpired terms are Dale Moore, Ava; H. R. Sherwood, Kahoka; O. J. Nicholson, Monette, and H. F. Hoffman, Trenton.

Officers of the association, who are serving unexpired terms, include Curtis E. Carter, Odessa, president; Murray Renick, Rolla, first vice president; Clarence Schilmpert, Jackson, second vice president; Henry H. Green, Pattonburg, honorary vice president, and D. A. Meinershagen, Higginsville, executive secretary-treasurer.

HEARING

(Continued from page 1)

Committee, was adjourned May 18, but this adjournment meant the beginning of perhaps a bigger task for the committee and its staff—that of threshing through heaps of testimony. This is expected to take several weeks.

The three-day session was actually a continuation of a hearing conducted almost a year ago here. E. V. Hill, the committee's chairman, concluded then that opposition from shippers of grain and related products to proposals of the railroads warranted further study and reconsideration.

While presentations by shippers during the later hearings were far from being unanimously favorable to what the eastern railroads were proposing, represented firms who raised objections found less in the proposals to criticize than they did in last year's hearing.

However, eastern feed groups and others strongly opposed some proposals.

Of Major Concern

One of the proposals which was considered at great length involves increasing certain minimum car shipments of grain and grain products from the "traditional" 20 tons to 25 tons (Feedstuffs, May 6, page 4). Related to this proposition are proposals which would provide for a rate of 5½¢ cwt. under the 25-ton rate for a minimum of 40 tons.

Speaking for the Chicago Board of Trade, J. S. Chartrand, vice president for transportation, said he opposed the 25 and 40-ton minimum weights on grain products "at 6¢ and ½¢ rate differentials over the grain rate."

A joint presentation by a group of Minneapolis millers said it had no particular objection to the proposed rate levels, but was opposed to dual minimums for grain products at ½¢ over the grain rate for 40 tons and 6¢ over for 20 tons "as being highly detrimental" to grain product traffic on railroads.

A number of industry spokesmen said current railroad proposals would eliminate the 20-ton car, and this would drive shorter-haul receivers from rail transportation to other means, such as truck and boat.

Some said they were disturbed by the intention of the carriers to restrict the new proportional rates of specific origin to destination junction point routing, going on to say that "routes are as much a part of the structure as the rates themselves."

It was stated in other testimony that the 25-ton minimum provision put "the small feed dealer with limited finances and physical facilities at a distinct disadvantage."

John E. Bressette of Wirthmore Feeds, Waltham, Mass., representing eastern feed manufacturers, described the proposed rates as "totally unrealistic" and said they would result in "readjustments which would destroy the industry."

Harold Ford Leaves For European Trip

ATLANTA, GA.—For the purpose of developing poultry business in Europe and to remove trade barriers, Harold Ford, executive secretary of the Southeastern Poultry & Egg Assn. left recently for Europe. He will cover six countries.

Accompanying him on the trip will be Bill Simmons of Siloam Springs, Ark. Mr. Ford is co-chairman, along with Mr. Simmons of the International Trade Development Committee's Trade Barriers Committee.

The first stop will be the International Food Fair in Paris, and afterwards they will meet with government officials in France, Germany, Italy, Switzerland, The Netherlands and England. Both men will work toward gaining greater acceptance for American poultry in overseas markets.

Commercial Solvents Holds Sales Meeting

CHICAGO—The largest sales meeting in the history of the animal nutrition department of Commercial Solvents Corp. was held in Chicago, following the close of the American Feed Manufacturers Assn. convention.

I. Roy Cohen, sales manager, presided over the meeting which was held on Thursday and Friday, May 11 and 12. Other officials of the company attending were: M. C. Wheeler, president, and W. Ward Jackson, vice president-sales.

During the past year the nationwide sales staff has been expanded and realigned in order to better serve the feed manufacturing industry, Mr. Cohen pointed out. The CSC line of animal nutrition products includes Baciferm (zinc bacitracin), choline chloride, riboflavin and vitamin B_{12}, as well as the recently marketed product Silotracin, a new antibiotic silage preservative.

Representatives of other departments included market development, advertising and sales promotion, research, technical service, production, credit, traffic and quality control.

Some 35 persons from the sales and other departments were on hand for the meeting.

12,500-Head Feedlot, Mill Set in Kansas

PRATT, KANSAS—Bids were expected to be opened this week on the construction of a feedlot and feed mill for the Pratt Industrial Development Corp. Work on construction is planned to start very soon and the feeding operation is expected to get under way sometime in October or early November. The feed yards, which are being located on the concrete runways at the former Pratt air base, will have a capacity capable of handling 12,500 head.

The operation is divided into three phases, the Comanche Cattle Pool Co., the Lewter Feed Lots and the Lewter Mill & Grain Co. Durwood Lewter of Lubbock, Texas, well known in the cattle feeding industry, will be general supervisor of the operations. The resident manager will be Frank G. Smith.

CONTROLS

(Continued from page 1)

steady growth of the poultry and egg industries attests to the fact that they have demonstrated their capacity to weather temporary difficulties and come out stronger and more efficient.

"We recognize that we have some difficulties at the present time, but we are confident we can surmount these with the help of innovators who will develop further efficiencies in production, processing and marketing," he stated. "Under marketing orders and controls these improvements might well be discouraged."

Mr. Williams argued also that the poultry and egg industries do not lend themselves to restrictive production and marketing regulations because eggs and broilers are not once-a-year crops, they are not tied to the land and are perishable.

Short Production Cycle

"The short production cycle of poultry and eggs makes rapid adjustments between supply and demand possible," he said. "Fast, coordinated action is required in the production, processing and handling of poultry and egg products. . . . Only through the closest coordination between all segments of the industries have increased economies been effected. Any disturbance of these interdependent factors could seriously impair the efficiency of the total production and marketing operation."

The FEED MARKET

PRICE QUOTATIONS, MARKET TRENDS
OF PRINCIPAL INGREDIENTS

NOTE: Quotations on feed ingredients shown in these and adjoining columns are wholesale prices, per ton, bulk, for prompt delivery, unless otherwise noted. They are the latest quotations available from Feedstuffs correspondents and are not necessarily those in effect on date of publication. The prices represent fair average trading values and do not necessarily represent extreme low or high levels at which individual sales might have occurred. A descriptive summary of supply and demand factors prevalent in the feed market appears on page 2.

ALFALFA MEAL

Minneapolis: The market continues strong due to the cool spring weather; 17% dehydrated, 100,000 units vitamin A reground pellets steady at $49, delivered Minneapolis; oiled reground pelleted $51.

Denver: Demand fair; trend steady; supply ample; $46.

Chicago: Demand fair; trend steady to 50¢ up; supply moderate; dehydrated, 17% protein, 100,000 units vitamin A $48@50.

Seattle: Demand fair; trend easy; supply ample; suncured, 15% protein $38, Seattle, down $10 (new crop); dehydrated, 150,000 A units $67, Seattle, down $4 (new crop).

Portland: Demand slow; trend steady; supply adequate; 15% suncured $44; 20% protein dehydrated pellet meal $71, sacked.

Buffalo: Demand and supply fair; trend steady; $64.10, sacked, Boston, unchanged.

Kansas City: Demand fair; trend steady; supply tight for spot; 17% dehydrated alfalfa, 100,000 A, pellets $45@46, reground pellets $46@47; 18% dehydrated alfalfa, 125,000 A, pellets $47@49, reground pellets $48@50; 20% dehydrated alfalfa, 150,000 A, pellets $48@56, reground pellets $49@57; dehydrated prices unchanged; suncured alfalfa, demand slow, supply ample, 13% pellets $32@33, No. 1 ¼-in. $38, sacked, unchanged.

Cincinnati: Demand fair; trend steady to easy; supply adequate; 17% dehydrated, 100,000 vitamin A, pellets $44@55, up $1.50.

Ft. Worth: Demand fair for dehydrated, slow for suncured; trend easier; supply sufficient; sacked: dehydrated, 17%, 100,000 A $49, truck or rail, down $1; suncured: 13% ¾-in. grind No. 1 $45, truck; 15% fine ground, dry $47, with 2% fat added $49, rail or truck, unchanged.

Los Angeles: Demand for dehydrated steady, suncured moderate; trend steady; supply of dehydrated limited, suncured adequate; dehydrated meal, 17% protein, 100,000 A $51@52; dehydrated pellet meal, 17% protein, 100,000 A $53@55; suncured meal, 15% protein $43@44; suncured crumbles, 15% protein $45@46.

Boston: Demand slow; trend easier; supply ample; dehydrated, 17% $58, down $5; suncured 13% $45, down $1.

St. Louis: Demand good; trend easier; supply limited; dehydrated, 17% protein, 100,000 units vitamin A, pellets, bulk $48.50, unchanged.

Memphis: Demand steady to good; trend steady; supply adequate; dehydrated, 17% protein, guaranteed 100,000 units vitamin A $46.60, up $3.10; reground pellets $50.60, down $2.

ANIMAL FAT (STABILIZED)

St. Paul: Demand good; supply ample; trend steady; price off ½¢ to 7¾¢, f.o.b. producer's plant.

Atlanta: Demand good; trend steady; supply very limited; 7⅝@8¼¢ lb., f.o.b. production points, up 1¢.

Chicago: Trend easier to firm, down ¼¢ on yellow grease; tank truck or carload, bleachable fancy tallow $8.12½ cwt., yellow grease $7.37½ cwt.

Kansas City: Demand steady; trend steady; supply available; stabilized prime tallow 7⅝@7¾¢ lb., unchanged.

Ft. Worth: Demand good; trend steady; supply moderate; prime tallow, tank cars 8¢ cwt., drums 9½¢ cwt., f.o.b. north Texas packing plants with returnable drums, unchanged.

Los Angeles: Demand steady; trend easier; supply adequate; 7¢ lb.

St. Louis: Demand good; trend firm; supply ample; yellow grease 7¾¢ lb., delivered tank cars or trucks, unchanged.

San Francisco: Demand good; trend down; supply ample; bleachable fancy 8¼¢ lb., off ⅛¢ lb.; yellow grease 7¼¢ lb., off ⅛¢ lb.

Boston: Demand good; trend steady; supply tight; tallow 8¼¢ lb.; yellow grease 7¼¢ lb., both unchanged.

Memphis: Demand fair; trend steady; supply ample; yellow grease 7⅝¢ lb., up ⅜¢; prime tallow 7¾¢ lb., up ⅜¢.

BARLEY FEED

Denver: Demand good; trend strong; supply short; $2.40 sacked, $2.10 bulk.

Chicago: Demand fair; trend unchanged; supply ample; $34, sacked.

Baltimore: Demand fair; supply adequate; trend unchanged; $44.50, sacked.

Seattle: Demand fair; trend firm; supply good; $46, truck lots, up $1.

Boston: Demand and supply fair; trend steady; $45, unchanged.

Los Angeles: Demand slow; trend steady; supply light; $2.47½ cwt., unchanged.

San Francisco: Demand fair; supply ample; trend steady; rolled $61, ground $60, both unchanged.

BLOOD MEAL

Chicago: Demand good; trend unchanged; supply fair; 80% protein $137.50, sacked.

Los Angeles: Demand slow; trend steady; supply ample; $5.25 a unit of ammonia, sacked.

San Francisco: Demand and supply fair; trend steady; $4.50 a unit of ammonia, sacked, unchanged.

BONE MEAL (STEAMED)

Denver: Demand normal; trend steady; supply ample; $115.

Los Angeles: Demand fair; trend steady; supply ample; imported $80.75, 20 ton lots, sacked, unchanged.

Cincinnati: Demand good; trend steady; supply fair; $105, sacked, Cincinnati, up $5.

Chicago: Demand and supply fair; trend firm; $100, sacked.

Seattle: Demand fair; trend steady; supply good; $92, f.o.b. car Seattle, sacked, unchanged.

Buffalo: Demand good; trend steady; supply fair; $105, sacked, f.o.b. Buffalo, unchanged.

Ft. Worth: Demand fair; trend steady; supply sufficient; domestic $100, sacked, f.o.b. Ft. Worth, unchanged.

Boston: Demand and supply steady; trend steady; $108, unchanged.

San Francisco: Demand good; supply ample; trend steady; $75, unchanged.

BREWERS DRIED GRAINS

San Francisco: Demand fair; supply ample; trend steady; $51, sacked, unchanged.

Los Angeles: Demand good; trend steady; supply limited; $50, unchanged.

Boston: Demand fair; trend fairly steady; supply adequate; 26% $44, unchanged.

Cincinnati: Demand poor; trend steady; supply adequate; $41.75, unchanged.

Chicago: Demand quiet; trend $1 higher; supply light; 26% protein $34.

Buffalo: Demand and supply fair; trend steady; $44, Boston, unchanged.

Ft. Worth: Demand slow; trend steady; supply sufficient; 26% protein $49.50, sacked, down $1.

St. Louis: Demand good; trend steady; supply adequate; 26% protein $35, up 50¢.

BREWERS DRIED YEAST

Boston: Demand and supply steady; trend steady; 11¢ lb., unchanged.

Cincinnati: 9@10¢ lb., sacked, unchanged.

Ft. Worth: Demand slow; trend steady; supply sufficient; 11½¢ lb., 5 ton lots, sacked, unchanged.

Los Angeles: Demand good; trend steady; supply limited; 10¢ lb., 5 ton lots; 11¢ lb., 1 ton lots; 12¢ lb., less than ton lots; all sacked and unchanged.

St. Louis: Demand fair; trend firm; supply ample; 9½@10¢ lb., carlots, sacked; 10½¢ lb., ton lots; 11½¢ lb., less than ton lots.

Buffalo: Demand fair; supply ample; trend steady; $8.45 cwt., unchanged.

Seattle: Demand slow; trend steady; supply ample; $12 cwt., sacked.

San Francisco: Demand fair; supply good; trend steady; 10¢ lb., sacked, unchanged.

CALCIUM CARBONATE

Denver: Demand and trend steady; supply ample; $12.50, carload.

Cincinnati: Demand fair; trend steady; supply adequate; $7@7.50 cwt., unchanged.

Chicago: Demand fair; trend steady; supply ample; fine grind, plain, 100 lb. bags $9.54; bulk, in hopper cars $7.54; bulk in boxcars $8.04; granular grind $1 premium.

Minneapolis: Fine grind, 50 lb. bags $13.75; 100 lb. bags $13; bulk, boxcar $11.50; bulk, hopper $11; coarse grind $1 premium, delivered Minneapolis.

Seattle: Demand and trend steady; supply good; $14, ex-warehouse, sacked.

Ft. Worth: Demand normal; trend steady; supply sufficient; $4.50@5, f.o.b. north Texas, unchanged.

Los Angeles: Demand fair; trend steady; supply adequate; flour $9.85, 20 ton cars; meal $10.20, 20 ton cars; both sacked and unchanged.

COCONUT OIL MEAL

Los Angeles: Demand moderate; trend firmer; supply adequate; copra cake $65.50@67.50, up 50¢@$2.50, May off-shore takeout.

Seattle: Demand fair; trend firm; supply tight; $70, f.o.b. car Seattle, sacked, solvent type, unchanged.

Portland: Demand fair; supply ample; trend unchanged; 20% solvent $62.20.

San Francisco: Demand fair; supply ample; trend steady; solvent $52, unchanged.

CONDENSED FISH SOLUBLES

Denver: Demand and trend steady; supply ample; 3½¢ lb., West Coast.

Ft. Worth: Demand fair; trend steady; supply practically unobtainable; tank car, West Coast production $4.16 cwt.; dried fish solubles $146.60 ton, unchanged.

Boston: Demand slow; trend fairly steady; supply adequate; $37.50, unchanged.

Los Angeles: Demand good; trend steady; supply limited; 3¼@3½¢ lb., unchanged.

CORN OIL MEAL

Seattle: Demand good; trend steady; supply ample; $54 car, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; $46, unchanged.

CORN GLUTEN FEED AND MEAL

(All quotations for all cities are bulk basis, sacked basis $6 more)

Minneapolis: Feed $45.70, meal $30.70.
Atlanta: Feed $49.10, meal $84.10.
Birmingham: Feed $46.90, meal $81.90.
Boston: Feed $50.60, meal $85.60.
Chicago: Feed $39, meal $74.
Cleveland: Feed $47, meal $82.
Denver: Feed $49.30, meal $84.30.
Ft. Worth: Feed $47.80, meal $82.80.
Indianapolis: Feed $44.25, meal $79.25.
Kansas City: Feed $39, meal $74.
Louisville: Feed $45.55, meal $80.55.
New York: Feed $50.20, meal $85.20.
New Orleans: Feed $49, meal $84.
Norfolk: Feed $49.60, meal $84.60.
Philadelphia: Feed $49.80, meal $84.80.
St. Louis: Feed $39, meal $74.

COTTONSEED OIL MEAL

Denver: Demand good; trend strong; supply fair; $63.50, delivered.

Atlanta: Demand and supply fair; trend weak; 41% $67, Georgia and South Carolina, $60 Alabama, $56.50 Mississippi, $57.50 Tennessee producing mills, down $2.50.

Cincinnati: Demand fair; trend steady to lower; supply adequate; $66.50, down $3.50.

Ft. Worth: Demand fair; trend slightly easier; supply adequate; 41% old process $58, f.o.b. mills Ft. Worth; solvent 2% fat added $58, delivered Ft. Worth May, $60.40 June-July, about unchanged; pellets $2 additional; hulls $14@15, unchanged.

San Francisco: Demand fair; supply ample; trend firm; 41% $67.20, 44% $71.20, both unchanged.

Los Angeles: Demand and trend steady; supply moderate; $60, unchanged.

Buffalo: Demand fair; trend steady to lower; supply good; $79.25, sacked, Boston, off $2.

Seattle: Demand fair; trend firm; supply limited; 41% expeller $74, f.o.b. car Seattle, unchanged.

Chicago: Demand and supply fair; trend down $2; Memphis basis: hydraulic $58.50, solvent $58.50.

Portland: Demand fair; supply adequate; trend unchanged; $74.20@75.20.

Kansas City: Demand slow; trend easier; supply ample; 41% old process $62, down $2; 41% solvent process $63.80, unchanged.

St. Louis: Demand fair; trend firm; supply ample; 41% solvent process $59, Memphis, down $1.

Memphis: Demand poor; trend weak; supply ample; prime 41% protein, old process $57.50, down $2.50; new process, 41% protein $57, down $3.

CURACAO PHOSPHATE

New York: Minimum 14% phosphorus $43.50 sacked, $40.50 bulk, f.o.b. New Orleans, Jacksonville and Philadelphia.

DEFLUORINATED PHOSPHATE

Coronet, Fla.: Minimum phosphorus 18%, minimum calcium 31%, maximum calcium 34%, maximum fluorine .18%; guaranteed uniform analysis; carload $61.25, sacked, 100 lb. multiwall bags, bulk $58.25; truck load $62, sacked, in 100 lb. multiwall bags, bulk $59, f.o.b Coronet, Fla.

Tupelo, Miss.: Minimum phosphorus 14%, minimum calcium 28%, maximum fluorine .14% $52, f.o.b. Tupelo in 100 lb. multiwall bags, $49 bulk.

Wales, Tenn.: Minimum phosphorus 18%, minimum calcium 33%, maximum 36%, maximum fluorine .18% $66 (or $3.67 per unit of P), f.o.b. Wales in 100 lb. multiwall bags, $3 less in bulk.

Butte, Mont.: Minimum phosphorus 18%, minimum calcium 32%, maximum calcium 36%, maximum fluorine .18% $81 (or $4.50 per unit of P), f.o.b. Butte, 100 lb. multiwall bags; bulk $78; truck lots of less than 10 tons $10 more, bagged or bulk.

Houston: Minimum phosphorus 19%, minimum calcium 32%, maximum calcium 36%, maximum fluorine .19% $69.35 net ton, f.o.b. Houston, 100 lb. multiwall bags; $66.35 bulk ($3.65 per unit of P).

Ft. Worth: Demand fair; trend steady; supply sufficient; minimum 18½% phosphorus, maximum 31% calcium, maximum .18% fluorine $76.65, sacked, unchanged.

Cincinnati: 18% phosphorus, carlots $74.30, ton lots $84.30; 14% phosphorus, carlots $62.50, ton lots $72.50, f.o.b. Cincinnati.

Los Angeles: Demand slow; trend steady; supply adequate; 18½% phosphorus $95.10, sacked, unchanged.

Seattle: Demand and supply good; trend steady; $93.50, ex-dock, Seattle, sacked, unchanged.

DICALCIUM PHOSPHATE

Denver: Demand good; trend steady; supply ample; $88.50, delivered.

Trenton, Mich.: 18½% P $83, bulk, boxcar/hopper car; $86, bagged, in less than carload lots; 21% P, $94.05, bulk, boxcar/hopper car; $97.65, bagged, in carloads or truck loads; $107.65, bagged, less than carload; all prices f.o.b. Trenton, freight equalized with nearest producing point.

Chicago: Bulk, carlots and truck loads, 18½% phosphate $78 and 21% phosphate $89; packed in 100 lb. papers, 10 tons or more, 18½% phosphate $81 and 21% $92; lesser quantities, 18½% phosphate $91 and 21% $102; above prices per ton, f.o.b. Chicago Heights, Ill., or Nashville, Tenn.

Bonnie, Fla.: Minimum phosphorus 18½%, granular, $81 (or $4.38 unit of P), freight equalized from nearest producing point, carload basis; bulk carloads $3 less; in truck loads of less than 10 tons, $10 more. Western slope prices, for delivery at established railroad stations and by truck at regular feed mixing plants: California, Arizona, Nevada and Utah, $99.90; Washington, Oregon, Montana and Idaho, $107.15; bulk carloads $3 less; truck loads less than 10 tons, $10 more.

Columbia, Tenn.: Minimum phosphorus 18.5%, minimum calcium 24% $81, f.o.b. Columbia, in 100 lb. multiwall bags; freight equalized with nearest producing point, carload basis; bulk $3 ton less.

Texas City, Texas: Minimum phosphorus 18.5%, minimum calcium 20%, maximum calcium 23%, maximum fluorine .12%; carload and truck load $75.50, sacked in 100 lb. multiwall bags, bulk $72.50, f.o.b. Texas City.

Buffalo: Demand and supply good; trend steady; $82.93, sacked, Boston, unchanged.

Ft. Worth: Demand fair; trend steady; supply adequate; $81.50, sacked, unchanged.

Cincinnati: 18½% phosphorus $88.80, bagged in carloads; $98.70, bagged in ton lots, f.o.b. Cincinnati; $81, f.o.b. producing points, unchanged.

Seattle: Demand good; trend steady; supply limited; $91, ex-dock Seattle, sacked, unchanged.

Los Angeles: Demand slow; trend steady; supply adequate; 18½% phosphorus $95.10, sacked.

DISTILLERS DRIED GRAINS

Louisville: Demand fair; trend steady; supply adequate; bourbon grains, dark $52, sacked and packed f.o.b. Louisville; bulk $5 less; light feed $1@2 less; solubles $73.

Seattle: Demand good; trend firm; none available; $71, delivered truck lots, sacked, unchanged.

Buffalo: Demand good; trend steady; supply fair; $59, Boston, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; $51@52, unchanged.

Boston: Demand spotty; trend unsettled; supply adequate; light $55@58, down $1@3; dark $57@58, down $3@4.

San Francisco: Demand fair; supply ample; trend steady; solubles $79, sacked, unchanged.

DRIED BEET PULP

Denver: Demand light; trend steady; supply scarce; $60.

Atlanta: Demand fair; trend steady; supply limited; $63.50, sacked, delivered, unchanged.

Los Angeles: Demand and trend steady; supply moderate; $44.90@45.20, unchanged.

Seattle: Demand good; trend steady; supply ample; $49, delivered carlots, sacked, unchanged.

Portland: Demand good; trend steady; supply adequate; $47.58, sacked.

Buffalo: Demand fair; trend steady to higher; supply fair to poor; $67, sacked, Boston, up $1.

Boston: Demand and supply steady; trend steady to firm; $65, sacked, unchanged.

San Francisco: Demand good; supply fair; trend steady; $45.50, unchanged.

DRIED BUTTERMILK

Chicago: Demand and supply fair; trend unchanged; medium acid $10@10.50 cwt., sweet cream $10@10.50 cwt., both sacked.

Buffalo: Demand poor; trend steady; supply ample; $10.55 cwt., unchanged.

Boston: Demand and supply fair; trend steady; 14¢ lb., unchanged.

Los Angeles: Demand fair; trend steady; supply ample; 13¾@14¢ lb., sacked, unchanged.

San Francisco: Demand fair; supply ample; trend steady; 13½¢ lb., sacked, unchanged.

DRIED CITRUS PULP

Los Angeles: Demand steady; supply light; orange pulp $43, lemon pulp $43, both nominal.

Buffalo: Demand poor; trend steady; supply fair; $35, sacked, f.o.b. Florida points, unchanged.

Boston: Demand slow; trend easier; supply adequate; $52.70, sacked, down $1.50.

San Francisco: Demand and supply fair; trend steady; meal $48, sacked, unchanged.

Atlanta: Demand and supply good; trend stronger; pulp $35 sacked, meal $32.50 sacked, both f.o.b. Florida processing plants; up $2.50 to unchanged.

DRIED SKIM MILK

Minneapolis: Price continues very firm at $12.

Cincinnati: Demand fair; trend steady; supply adequate; 12@13¢ lb., sacked, unchanged.

Ft. Worth: Demand fair; trend steady; supply limited; $15.65 cwt., sacked, unchanged.

Buffalo: Demand fair; trend steady; supply ample; spray $11.45 cwt., unchanged.

Chicago: Demand improved; trend up 25@40¢; supply light; $10.75@11.25 cwt., sacked.

Los Angeles: Demand slow; trend steady; supply adequate; 14¢ lb., less than ton lots; 13¾¢ lb., ton lots; both sacked.

Boston: Demand and supply steady; trend firm; 13½¢ lb., unchanged.

San Francisco: Demand and supply fair; trend steady; 14½¢ lb., sacked, unchanged.

DRIED WHEY

Minneapolis: Supplies continue ample; demand good; price steady at $5.10.

Denver: Demand good; trend steady; supply ample; $5.25 cwt.

Cincinnati: Demand fair; trend steady; supply adequate; $5.75 cwt., sacked, unchanged.

Seattle: Demand steady; trend easy; supply good; $5.85 cwt., ex-warehouse, l.c.l., unchanged.

Chicago: Demand better; trend up 22@25¢; supply moderate; $4.75@5 cwt., sacked.

Kansas City: Demand good; trend steady; supply ample; $5 cwt., sacked, unchanged.

Ft. Worth: Demand fair; trend steady; supply adequate; standard $5, sacked, truck or rail, delivered Ft. Worth; ton lots $5.25, f.o.b. warehouse Ft. Worth, unchanged.

Los Angeles: Demand fair; trend steady; supply adequate; $5.18 cwt., carloads; $5.35 cwt., l.c.l., both sacked and unchanged.

Boston: Demand good; trend steady; supply adequate; 5¼¢ lb., unchanged.

San Francisco: Demand and trend steady; supply good; $5.25 cwt., sacked, unchanged.

FEATHER MEAL (HYDROLYZED)

Atlanta: Demand good; trend stronger; supply very limited; $85, f.o.b. production points, up $2.

Boston: Demand active; trend firmer; supply tight; $90, sacked, up $5.

Ft. Worth: Demand fair; trend firm; extremely limited supply; 85% protein, nominal $85@90, unchanged to $3 higher.

Los Angeles: $1 a unit protein, sacked, unchanged, nominal.

San Francisco: Demand and supply fair;

trend firm; $95, sacked, unchanged.

FISH MEAL

Atlanta: Demand good; trend stronger; supply tight; 60% menhaden $116@118, sacked, Atlantic and Gulf ports, up $5.

Minneapolis: Demand good; supplies fair to poor; the price of West Coast blended declined $2 to $142, sacked, delivered, and Canadian herring remained at $1.75 a unit, f.o.b. West Coast, subject to production.

Denver: Demand good; trend steady; supply short; $1.85 a protein unit, West Coast.

Boston: Demand good; trend firm; supply tight; 57% $110; 60% $114; both unchanged.

Los Angeles: Demand steady; trend firm; supply light; local production, 60% protein $1.90 a unit, sacked, unchanged.

Seattle: Demand fair; trend firm; supply limited; $1.90 a unit protein, f.o.b. truck Vancouver, B.C., sacked (Canadian production), up 10¢ per unit of protein.

Chicago: No old crop offerings; new crop eased off at $121 for Gulf menhaden; Canadian herring holding firm at $1.90 a unit of protein.

Portland: Demand slow; trend steady; supply ample; $1.95 a protein unit, sacked.

Buffalo: Demand good; trend strong; supply very light; 60% protein menhaden $120, f.o.b. Buffalo, unchanged.

Ft. Worth: Demand excellent; trend firm; offerings extremely light for immediate; 65% protein, Peruvian $124, sacked, May, down $2.

Cincinnati: Demand fair; trend steady; supply adequate; $108.10, unchanged.

San Francisco: Demand fair; supply ample; trend firm; $1.85 a unit of protein, up 10¢ a unit.

HOMINY FEED

Boston: Demand good; trend firm; supply adequate; $48.50, up $1.50.

Chicago: Demand fair; trend $1 higher; supply light; $39.

Seattle: Demand good; trend steady; supply limited; $53, delivered carlots, sacked, unchanged.

Buffalo: Demand fair to good; trend higher; supply fair; $50.50, Boston, up $1.50.

Cincinnati: Demand fair; trend higher; supply adequate; $42.50, up $2.

Los Angeles: Demand good; trend easier; supply adequate; hominy meal $48.50, June, down $1.50; hominy pellets $50.50, June, down $1.50.

Kansas City: Demand fair; trend steady; supply ample; white or yellow $33@33.50, unchanged.

St. Louis: Demand good; trend firm; supply ample; yellow $39, up $3.50.

LINSEED OIL MEAL

Minneapolis: Demand good; supplies good; prices off 50¢@$1 on 32% solvent $55.50 @56.

Denver: Demand fair; trend steady; supply ample; $69.50.

Boston: Demand good; trend firm; supply fair; $78.20, up $1.

Cincinnati: Demand poor; trend steady; supply adequate; new process $57.50, old process $61, Minneapolis, unchanged.

Ft. Worth: Demand slow; trend steady; supply sufficient; 34% protein, extracted $71.40, May, unchanged.

Seattle: Demand fair; trend steady; supply good; 34% protein (Montana) $85, delivered carloads, sacked, unchanged.

Chicago: Demand and supply fair; trend firm to 50¢ easier; Minneapolis basis: solvent $55.50, expeller $60.

Portland: Demand slow; trend steady to firm; supply adequate; 34% solvent $85@ 86, sacked.

Buffalo: Demand fair; trend lower; supply good; $55.50, f.o.b. Minneapolis, off $1.

Los Angeles: Demand moderate; trend steady; supply ample; local production, 31% protein $71, unchanged.

San Francisco: Demand fair; supply ample; trend steady; $72, unchanged.

MEAT AND BONE MEAL

St. Paul: Demand slow; supplies ample; prices off from the $109@112 level to $105 @110.

Denver: Demand good; trend steady; supply scarce; $97.

Los Angeles: Demand moderate; trend steady; supply adequate; 50% protein $1.95 a unit, unchanged.

Chicago: Demand fair; trend firm; supply moderate; 50% protein $102.50, sacked.

Portland: Demand fair; trend lower; supply ample; $97.50@99, sacked.

Seattle: Demand fair; trend steady; supply limited; $2.05 a unit protein ex-processing plant, sacked, unchanged.

Buffalo: Demand good; trend strong; supply very scarce; 50% meat scraps $105, f.o.b. Buffalo, unchanged.

Kansas City: Demand fair; trend little easier; supply tight; 50% $102.50@105, unchanged to off $2.50.

Cincinnati: Demand good; trend strong; supply fair; 50% meat and bone scraps $106, Cincinnati, down $3.50.

Ft. Worth: Demand good; trend steady; limited offerings for immediate delivery; meat and bone, 50% $102.50 bulk, $103 sacked, f.o.b. Ft. Worth, unchanged.

St. Louis: Demand good; trend easier; supply adequate; 50% protein $103, down $2.

San Francisco: Demand good; supply fair; trend steady; $1.90 a unit of protein, up 5¢ a unit.

Boston: Demand and supply steady; trend steadier; $1.60@1.65 a protein unit; converted 50% $92.50@95; both unchanged.

Memphis: Demand slow; trend lower; supply ample; 50% protein $105, without billing, down $1.50; 50% protein $107.50, with rail transit, down $2.50.

MEXICAN PHOSPHATE

Brownsville, Texas: Mexican natural ground rock, 13% phosphorus $39 sacked, bulk $2 less; 14% $43 sacked, bulk $2 less.

MILLFEED

Minneapolis: Demand off; supplies good; sacked middlings were down $1 to $37.50; sacked bran was off $1 at $39, bulk $5 less; red dog sacked price was off $1 to $44.

Kansas City: Demand fair; trend little easier; supply ample; sacked bran $37.50@ 38, unchanged; sacked shorts $37.50@38, unchanged; bulk bran $29@29.50, down $1.50; bulk shorts $30@30.50, down $1; bulk middlings $30@30.50, down $1.

Ft. Worth: Demand slackening; trend firm; supply light for immediate delivery; bran, bulk $40, burlaps $46; gray shorts, bulk $41, burlaps $46.50; bulk middlings $41, delivered Texas common points; bulk

(Turn to QUOTES, page 98)

Major Markets Roundup

Most Proteins Retreat in Irregular Market

The price of soybean meal dropped as much as $3.60 per ton this week in an irregular, slow ingredient market. May protein feed ingredients were on the easier side late in the week. Millfeeds ranged from $1.50 higher to off as much as $6 at Buffalo.

In this irregular market, the pluses came out just ahead of the minuses in the week ended May 16 for an upward movement of the index of 0.2%, according to U.S. Department of Agriculture figures (see table).

Moving against the general downtrend in protein ingredients was gluten meal which advanced $2.

East

BOSTON: Millfeed price trends were again mixed in the local market with a fairly general display of caution as far as buyers were concerned. Distillers grains were under pressure and meeting with price resistance.

Reground oat feed enjoyed a much better demand but the white pulverized displayed an easier trend. Alfalfa meal was freely offered and not meeting with much buyer interest at current quotations.

Feather meal inquiry was sharply higher and the demand was sufficiently constant to enable that feed to attain one of the maximum rises of the week.

BUFFALO: Sliding wheat prices influenced by the approaching new crop put consumers of other ingredients in a wait-and-see attitude in hopes of lower levels all along the line. And most ingredients worked lower on the lack of attention.

Proteins retreated with 44% soybean oil meal off 50¢; cottonseed oil meal was down $2, and linseed oil meal off $1. Gluten meal, in short supply for months, bucked the trend and advanced $2. Corn held about steady, but oats worked 1 to 1½¢ higher on its good statistical position.

Barley held unchanged, but feed wheat gave up another 2¢ on expectations that grain held at upper Great Lakes ports will be moving down the lakes soon. Meat scraps were in good demand but prices held steady. Gluten feed, brewers' grains and distillers' grains held steady. Hominy feed was up $1.50. Bran stumbled on a spell of warm weather and dropped $5; middlings held firmer and gave up only $1.50; red dog was down $6. The sacked differential on bran and middlings held steady at $5.50.

Midwest

CINCINNATI: Sales of ingredients, especially meat by-products, strengthened considerably during the last week, as manufacturers stepped up production schedules.

Steamed bone meal advanced $5; alfalfa meal was up $1.50; hominy feed moved up $2, while bran was up $1. On the offside, cottonseed oil meal declined $3.50, but the market otherwise showed only minor or no price variations.

Feed manufacturers generally are expressing confidence that the market will remain steady to improving during the remainder of May to mark this month as the busiest, sales-wise, during this year to date.

ST. LOUIS: Feed ingredient dealers complained that buyers were few and far between this week. Feed business was down some, and in addition, most manufacturers seem to have a good backlog of bookings.

About the only item mentioned as being in strong demand is dehydrated alfalfa meal and this only because new crop production is being held down by wet weather. Practically all of the other ingredients are in good to generous supply.

It is generally thought that there has been a further considerable increase in soybean meal stocks in storage and this is borne out by reports of loaded cars on plant tracks that sellers are pressing for shipment. Wet corn processors in the area have been operating at a heavier rate and a few extra cars of gluten feed have been on the market. Prices, however, have held steady. Bullish sentiment in feed grains is being kept alive by reported heavy sign-ups by producers under the new feed grain legislation.

MINNEAPOLIS-ST. PAUL: An interesting feature of the local market this week was the soybean meal market where 50% protein meal was up $1.50 while the 44% was $1.50 to $2 lower. The 50% is in short supply and there seems to be increasing interest in the commodity.

The price of meat and bone meal was off $2 to $4 and tankage was also off $2 to $4. Linseed meal price declined 50¢ to $1 under good supplies.

The alfalfa meal market continues strong due to the cool spring in this area. The new crop of alfalfa has been reported to be in danger in some areas as aphids attack the plants faster than they grow in the cool weather.

Millfeeds were down $1 across the board locally.

Southwest

KANSAS CITY: Feed ingredients were generally all on the weak side with very few major items even holding their own for the week.

All protein meals were heavy and posted losses with soybean meal the big loser being off $1@2 and spot supplies pressing for sale. Cottonseed meal and linseed meal both worked lower with demand for both extremely slow. Mixers were hesitant to purchase beyond their spot needs in spite of a slightly improved formula feed business.

The millfeed market showed extreme pressure, particularly on the bulk feeds, and takings were again limited to only nearby needs. Bulk middlings were off as much as $4 in extremes while sacked shorts held better and only lost $1.50@2.

The new crop alfalfa production in Kansas added momentum this week with supplies being very well absorbed and prices holding about equal to last week. In most areas the protein fell below 20% this week but quality is considered satisfactory.

FT. WORTH: Demand for millfeed was active a few days ago but was slackening, with bulk bran and shorts unchanged to $1 down; however, the sacked products were a little tighter and $1 to $1.50 higher.

On the whole, demand for feed ingredients was slow but there were some spurts of business with the market fluctuations. On the lower side was fish meal, $2 off; dehydrated alfalfa meal and brewers grains were down $1. Changes in soybean meal quotations were less than $1 a ton compared with the previous week but there was some narrowing of the spread between 44% and 50% protein.

Harvesting of wheat, barley and oats was just getting under way in Texas and it is still too early to have a report on grades and yields.

South

LOUISVILLE: Demand for distillers dried grains continues reasonably good with no sizable accumulations reported. The market during May has remained very steady for bourbon grains.

Within the next week to 10 days the larger producers of distillers dried grains will probably establish the June markets. It is reported that there is considerable jockeying as some feel the price should be lower during pasturing season and some feel it should be higher due to a summer slowdown in production.

MEMPHIS: Prices of ingredients were irregular on the Memphis market this week.

Oilseed meal generally had lower prices; yet, demand failed to improve. Buying interest was centered in immediate and quick shipments. Millfeed was in somewhat better demand since strength returned to corn markets.

Demand for blackstrap molasses eased due to growth of pastures. Production of alfalfa meal has been delayed by wet weather, but it is picking up.

Due to the decline in vegetable proteins and animal protein raw materials, quite a difference between buyers' and sellers' ideas exists as to the value of animal and poultry protein at this time.

Oilseed meal futures prices were irregular on the Memphis Board of Trade compared with a week earlier. Trading was the quietest in some time.

Unrestricted soybean oil meal contracts generally were higher, based mainly on soybean export figures which were more bullish than the

Feeds: Average Bulk Prices and Index of Weighted Prices*
(Dollars per ton)

	May 16, 1961	May 9, 1961	Change from previous week
OILSEED MEALS			
Prices at prin. mkts.:			
Soybean meal	80.65	80.65	...
Cottonseed meal	62.50	63.30	— .80
Linseed meal	64.85	65.20	— .35
Copra cake or meal	59.25	58.50	+ .75
Peanut meal	64.00	62.00	+2.00
Index	97.0	97.2	— .2
ANIMAL PROTEIN FEEDS			
Prices at prin. mkts.:			
Meat meal	102.60	103.00	— .40
Tankage	102.40	102.40	...
Fish meal	112.50	110.00	+2.50
Index	90.1	89.9	+ .2
GRAIN HIGH-PROTEIN FEEDS			
Prices at prin. mkts.:			
Gluten feed and meal	51.75	50.95	+ .80
Dist. dried grains	52.20	52.20	...
Brewers dried grains	38.65	38.35	+ .30
Index	78.3	77.4	+ .9
WHEAT MILLFEEDS			
Prices at prin. mkts.:			
Bran	40.50	40.15	+ .35
Midds. and shorts	40.70	40.25	+ .45
Index	73.4	72.6	+ .8
OTHER MILLFEEDS			
Prices at prin. mkts.:			
Hominy feed	42.60	40.60	+2.00
Rice bran	29.00	29.00	...
Index	64.9	62.3	+2.6
ALFALFA MEAL			
Prices at prin. mkts.	49.95	49.90	+ .05
Index	96.2	96.1	+ .1
MOLASSES FEEDING			
Prices at prin. mkts.	28.44	28.18	+ .26
Index	84.6	83.9	+ .7
ALL FEEDSTUFFS			
Index	88.0	87.8	+ .2
FEED GRAINS			
Prices at prin. mkts.:			
Corn	39.70	39.30	+ .40
Oats	44.90	44.50	+ .40
Barley	41.80	41.90	— .10
Grain sorghums	39.50	39.80	— .30
Index	64.6	64.0	+ .6

*Base period of index is 1947-49. Source: USDA.

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trade had anticipated. Cottonseed oil meal market was quiet.

Trading was suspended during the week in Eastern Trunk Line 50% soybean oil meal, mainly due to lack of trading interest.

West

LOS ANGELES: Grain prices continue strong here with non-transit milo selling at $2.31¼@2.32½ cwt.

Approximately 30 to 35% of the new crop barley grown in the Imperial Valley has been harvested. This year's crop quality from irrigated fields is much improved from the past seasons. Some farmers are selling their barley for delivery now, but will not receive payment until January or March of 1962. The San Joaquin Valley barley harvest is just getting under way.

The millfeed market has been affected by the fact that flour mills are finding difficulty in operating at full capacity due to a dull demand. Some plants are not running five day weeks and millers do not seem too optimistic about the immediate future.

PORTLAND: Feed ingredient quotations closed the week slightly mixed but most trade sources agreed that the general trend looked a little stronger than that of the previous week. There was a volume amount of trading but buyers continued to order supplies only for nearby positions.

Soybean meal quotations turned moderately higher while making $1 to $1.50 gains. Linseed meal values were unchanged to $1 higher but cottonseed meal prices were barely unchanged. Animal protein feeds appeared irregular as a further reflection of moderate weaknesses for wheat and bone meal.

Wheat millfeed quotes closed $1 a ton higher as the result of improved buying interest and tight supplies. Whole feed grains averaged stronger with moderate advances for corn and barley. Oats listings closed easier with milo holding about steady.

SEATTLE: There was little change in the market here this week. Barley is pretty well cleaned up in eastern Washington and strengthened about $1 per ton. Soybean meal closed unchanged after fluctuation during the week.

Herring meal was up 10¢ per unit to $1.90 per unit f.o.b. truck or car, Vancouver, B.C. Peruvian fish meal remained in short supply. Meat meal was unchanged once again at $2.05 per unit. However, meat meal is now priced so high that it is being used sparingly in some rations. Meat meal is no longer in short supply. Copra meal is scarce and up $1 per ton to $70 per ton.

SAN FRANCISCO: The feedstuff market was again on the slow side as far as trading was concerned. Most buyers seemed content to take on supplies for their nearby needs.

Soybean meal showed the largest drop in price and was down about $3.60 per ton from the previous week. While imported fish meal showed an advance of 10¢ per unit of protein, sellers were finding it difficult to locate buyers as the week closed out. With prices for poultry and eggs where they are, most buyers feel that something will have to give and generally look for lower prices, at least on a few feed items.

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QUOTES

(Continued from page 97)

bran down $1, sacked up $1; bulk shorts and middlings unchanged; sacked shorts up $1.50.

Chicago: Demand fair at decline; trend off $2.50@3.50 on bran and middlings, steady to 50¢ off on red dog; supply ample; standard bran $34.50, standard midds. $35.50, red dog $40.50.

St. Louis: Demand fair; trend firm; supply adequate; sacked bran $43.25, shorts $43.25, up $1; bulk bran $36, middlings $36.50, up $1.

Cincinnati: Demand poor; trend steady; supply adequate; bran and middlings $43, bran up $1.

Boston: Demand spotty; trend unsettled; supply adequate; bran $48.10, up $1; middlings $48.10, down 50¢.

Buffalo: Demand fair; trend lower; supply good; bran $36.50, bulk, off $5; middlings $38.50, bulk, off $1.50; red dog $49, sacked, off $6; all f.o.b. Buffalo.

Memphis: Demand fair; trend weak; supply ample; wheat bran $38.80, up 50¢; gray shorts $38.30, unchanged; standard midds. $38.80, unchanged.

Seattle: Demand fair; trend firm; supply limited; $39, delivered common transit points, carlots, up $1.

Portland: Demand slow; trend firm; supply tight; $38@39.

Denver: Demand and trend steady; supply limited; shorts $38.25, bran $38.25, millrun $38.25.

Los Angeles: Standard millrun $46@47, nominal, demand good, trend firmer, supply very limited; red bran $48.50@49.50, demand moderate, trend steady, supply adequate.

San Francisco: Demand good; supply fair; trend steady; millfeed $43, unchanged; red bran $48.50, unchanged.

MOLASSES

Atlanta: Demand good; trend steady; supply limited; citrus $20@22, f.o.b. Florida producing plants, unchanged.

Minneapolis: Demand good; supply adequate; prices held strongly at $35 for blackstrap, tank truck, delivered; $31 for beet and $33 for blend.

Denver: Demand fair; trend steady; supply ample; $34.70, tank car.

Seattle: Demand and supply good; trend firm; $25.75, f.o.b. Seattle, tank truck lots, unchanged.

Buffalo: Demand and supply good; trend steady; 16½¢ gal., f.o.b. Albany.

Cincinnati: Demand fair; trend steady; supply adequate; 14½@14¾¢ gal., New Orleans, unchanged.

Kansas City: Demand fair; trend steady; supply tight; blackstrap 14½¢ gal., f.o.b. New Orleans, unchanged.

Ft. Worth: Demand fair; trend steady; supply sufficient; blackstrap 14¾¢ gal., f.o.b. Houston; truck $31.92, delivered Ft. Worth, seller's market price on date of shipment, unchanged.

Los Angeles: Demand good; trend steady; supply limited; $25.50, f.o.b. tank cars; $25.75, f.o.b. tank trucks; both unchanged.

Boston: Demand and supply steady; trend firm; 16½¢ gal. in tank cars, unchanged.

St. Louis: Demand fair; trend steady; supply ample; blackstrap 14½¢ gal., tank cars, New Orleans, unchanged.

San Francisco: Demand and supply good; trend steady; $25.75, f.o.b. cars, Richmond, Cal., unchanged.

Memphis: Demand fair; trend firm; supply ample; blackstrap 14½¢ gal., tank car, f.o.b. New Orleans, unchanged; $30.59 ton, delivered Memphis, truck, unchanged.

OAT PRODUCTS

Minneapolis: Demand slow; prices unchanged; sacked feeding rolled $77; sacked feeding oatmeal $63.50; sacked pulverized $42.50; sacked crimped $60; sacked oat feed $20.

Cincinnati: Demand poor; trend steady; supply adequate; pulverized white oats $44@50, unchanged.

Ft. Worth: Demand slow; trend steady; supply sufficient; 10% protein oat millfeed $41.50, sacked, unchanged; reground $21.30, sacked, unchanged.

Kansas City: Demand good; trend stronger; supply adequate; oat mill by-product $14@15, sacked, unchanged; feeding rolled oats $71@73, up $1.

Boston: Demand spotty; trend mixed; supply irregular; white pulverized, sacked $50.50, down 50¢; reground oat feed, sacked $24.60, up $3.60.

Seattle: Demand and supply fair; trend steady; $56 delivered truck lots, 38 lb. or better, unchanged.

Chicago: Demand and supply fair; trend 50¢ off to $1 up; reground oat feed $11.50, No. 1 fine ground feeding oatmeal $67, feeding rolled oats $71.

St. Louis: Demand fair; trend steady; supply ample; white pulverized $43.50, reground oat feed $13.50, both unchanged.

Buffalo: Demand and supply fair; trend steady to higher; $27.25, sacked, Boston, up $1.

OYSTER SHELL

Cincinnati: Demand fair; trend steady; supply adequate; 50 lb. bags $24.60, 25 lb. bags $26.85, unchanged.

PEANUT OIL MEAL

Atlanta: Demand fair; trend steady; supply limited; 45% $63 for solvent process, $66 for expeller process, f.o.b. Alabama and Georgia producing mills, unchanged.

Los Angeles: $80@81, sacked, nominal only.

POULTRY BY-PRODUCTS

Ft. Worth: Demand excellent; trend strong; supply extremely scarce; $107.50, nominal, sacked, f.o.b. Texas plants, up $2.50.

Los Angeles: Demand good; trend steady; supply limited; $1.75 a unit of protein, sacked, unchanged.

Boston: Demand active; trend steady; supply adequate; $95, unchanged.

Memphis: Demand fair; trend slightly lower; supply barely adequate; 55% meal $105, sacked, without billing, unchanged.

Atlanta: Demand good; trend stronger; supply very limited; meat meal $98, f.o.b. production points, up $1.

RICE BY-PRODUCTS

Atlanta: Demand good; trend steady; supply fair; bran $43, sacked, delivered, unchanged.

Buffalo: Demand fair; trend steady; supply short; $51.60, Boston, unchanged.

Ft. Worth: Demand fair; trend steady; supply scarce; rice bran $34@35, f.o.b. south Texas rice mills, sacked, unchanged; hulls $5, sacked, unchanged.

Los Angeles: Demand slow; trend steady; supply limited; California production, high fat content, bran $50, sacked.

San Francisco: Demand good; trend firm; supply ample; bran $43, up $3.

SOYBEAN OIL MEAL

Chicago: Demand fair; trend down 50¢@$1.50 on 44%, down $1@2 on 50%; supply ample; Decatur basis: 44% protein, unrestricted billing $72 and E.T.L. $67; 50% protein, unrestricted $81 and E.T.L. $77.

Minneapolis: Soybean meal prices ranged from $1.50 higher to $2 lower; 44% was easier at $1.50@2 lower, $64.50@65; 50%, in short supply, was up $1.50 to $75.

Atlanta: Demand fair; trend weak; supply good; 44% $80, delivered, down $3.

Denver: Demand good; trend strong; supply ample; $81.50.

Seattle: Demand fair; trend firm; supply ample; $98, delivered carlots, unchanged.

Portland: Demand slow; trend steady to firm; supply adequate; $101.60@102.10 for 50% protein with 44% test at $92.60@93.60.

Buffalo: Demand fair; trend steady to lower; supply good; $67.50, Decatur, off 50¢.

Ft. Worth: Demand fair; trend steady; supply sufficient; 44% $81.10 May, up 40¢, $82.60 June, up 60¢; 50% $90.80 May, $91.80 June, down 70¢.

Kansas City: Demand slow; trend weak; supply ample, spot pressing; 44% solvent process $67.50@68.50, Decatur, down $2.

Cincinnati: Demand poor; trend lower; supply adequate; $69, Decatur, down $2.

St. Louis: Demand fair; trend uneven; supply ample; 44% solvent $71, Decatur, down 50¢; 50% $81, down 50¢.

Boston: Demand slow; trend easier; supply ample; 44% $67, Decatur, off $1; 50% $77.50, Decatur, off 50¢.

San Francisco: Demand fair; trend easy; supply ample; $92.50, off $3.60.

Los Angeles: Demand slow; trend easier; supply increased; $91.60@92.60, down $1.50.

TANKAGE

St. Paul: Demand slow; supplies ample; prices declined from $104@109 to $102@105.

Chicago: Demand good; trend unchanged; supply moderate; 60% protein $105, sacked.

Kansas City: Demand fair; trend steady; supply available; 60% digester $102.50@105, unchanged to off $2.50.

Ft. Worth: Demand good; trend steady; supply very scarce; 60% digester $110, sacked, Ft. Worth, unchanged.

Cincinnati: Demand excellent; supply short; trend strong; 60% digester $106, Cincinnati, down $3.50.

VEGETABLE AND ANIMAL FAT (HYDROLYZED)

Ft. Worth: Demand excellent; supply limited; trend steady; 7¾¢ lb., f.o.b. north central Texas, unchanged.

General Mills Awarded $50,000 in Lawsuit

LITTLE ROCK, ARK. — General Mills, Inc., has won a $50,000 judgment in U.S. District Court here in a suit to collect payment for products sold to the Saline County Feed Co. at Benton, Ark.

Judge J. Smith Henley ruled that General Mills was entitled to $78,000 for feed products sold to Saline County Feed. He also ruled, however, that the Saline County firm was entitled to $28,839.73 for allegedly faulty products reported received from General Mills.

The $50,000 balance was awarded to General Mills.

David Crawford and Esmer Shell, identified as owners of Saline County Feed, claimed that 19,085 laying chickens purchased from General Mills either died or their laying production was reduced by disease. They also alleged that feed they purchased from General Mills was inferior.

The suit was filed Oct. 14, 1960.

POULTRY

(Continued from page 1)

resents "gossip" aimed at stimulating domestic markets.

It has been proposed for some time that the government include poultry in the Food for Peace program, and it has been suggested that government-held surplus grain be exchanged for broilers which would be used by the government for food aid overseas and for food relief programs in the U.S.

Such a program has been reported under consideration recently, but some persons here have said that "there is nothing in the cards to substantiate" such reports.

In addition to the recent reports, it is noted that back in February, a proposal that government feed grain be made available to feed manufacturers whenever poultry is exported was made by John P. Bauer, International Sales Corp., New York, at the meeting of the Institute of American Poultry Industries. (Feedstuffs, Feb. 18.) Under the plan, whenever poultry was exported, processors would obtain a certificate for an equivalent amount of feed grains, which could be passed on to the feed manufacturers for credit, the feed producer in turn collecting the grain from government supplies. It was said that present export subsidies on grains enable foreign operations to produce poultry products more cheaply than U.S. exporters can deliver similar poultry products abroad, using higher domestic feed grain prices.

Mr. Bauer contended that it would be better to enable U.S. poultry operations to compete better abroad and to enlarge foreign markets for American poultry than to "give our grain away to foreign competitors."

Recently, it also has been suggested that under a proposed program, government grain go in exchange for chicken used in food relief programs in the U.S.

Meanwhile, in regard to exports, some say that emphasis will be on continuing shipment of basic commodities like grain overseas rather than end products like broilers.

It is observed that some U.S. firms and foreign firms are building feed plants in Europe, where they hope to make use of bulk shipments of U.S. feed commodities. The overseas feed operations accept U.S. poultry products for market development, it is said, but over the longer run, some feel that a better course for U.S. agriculture is to ship basic commodities to western Europe and other dollar buying areas.

Thus, there is the continuing conflict between shipments of grains and shipments of end products.

Some of the Food for Peace proposals have been described as not sound. For example, some weeks back, when the director of the Food for Peace program went to Brazil to stimulate a program for that nation, it was understood that he took with him a document proposing a land resettlement program for northeast Brazil. Under this program it was said, some 2.5 million natives would be established on poultry farms which would be basically supplied from U.S. sources, all the way from the egg to the facility.

Since then, various questions have been raised. For example, where would the 2.5 million poultry farming initiates sell the production of their farms? (It was not disclosed whether they would be small flocks or relatively large operations of many units.) And since the facilities and feed grains would be at the expense of the U.S., what would happen to the existing commercial facilities in this country?

PRICES

(Continued from page 1)

up 11%—but these increases were more than offset by an 8% reduction in pork output. Cattle and sheep and lamb slaughter continued above a year earlier in federally inspected plants during April.

Further comments and predictions concerning livestock production, slaughter and prices, as reported by USDA, included the following:

HOGS—Although hog prices are expected to decline seasonally this fall, severe price reductions are not likely. USDA notes that the spring pig crop is the second smallest in the past eight years. "The consuming public is larger and beef supplies per peson are not expected to be any larger this fall than last," USDA economists note.

Increased production and marketings of hogs were analyzed this way:

Last fall's pig crop was 3% smaller than the previous fall crop. However, USDA notes, the number of sows farrowing in the last two months of the

season (October-November) was above a year earlier. March reports indicated that December intentions of producers to increase the 1961 spring pig crop by 5% probably were being exceeded slightly. Moreover, these producers planned for 5% more early fall (June-August) farrowing this year than last year.

Since January, hog slaughter has totaled about 10% below last year, following the smaller pig crops in 1960—but the margin below last year has narrowed.

Looking ahead, USDA anticipates that the total increase for fall farrowings may be in the 5-8% range. Such an increase, even at the 5% rate, would mean a record large crop. Intentions for 5% more June-August farrowings as reported for 10 of the Corn Belt states are the first indications regarding the prospective size of this fall's pig crop.

A new factor affecting hog economics is the 1961 emergency feed grain program. USDA says market supplies and prices will be influenced by the extent of farmer participation and by governmental sales policy for feed grains.

"If feed grain prices are higher and supplies smaller this fall, when farmers are making plans for the 1961 spring pig crop, chances for an increase would be lessened," USDA says. "However, feeding ratios are expected to favor a larger spring pig crop in 1962 than in 1961."

CATTLE—USDA observes that producers apparently are optimistic about cattle prices expected during the rest of the year. Stocker and feeder cattle prices have strengthened about as usual for this time of year. This trend holds true for cow and calf prices also.

Cattle slaughter during the rest of 1961 is expected to continue a little above a year earlier, with most of this gain in fed cattle. The outlook for cow and calf slaughter is for continuation at a cyclically low level, but there's a chance slaughter will be up from a year earlier.

USDA says a resumption of strong demand for beef is expected, and prices for most grades and classes of cattle this summer and fall are likely to average near those of 1960.

Better Basis for Forecasting

USDA says recent developments in cattle slaughter being more nearly in line with the level of cattle numbers and the current phase of the cattle cycle make a better basis for forecasting trends for the rest of year.

"Cattle slaughter last fall was undoubtedly smaller than anticipated when it became increasingly apparent that cattle inventories were not as high as estimated earlier and the danger of demoralized marketings was postponed, if not almost eliminated," department officials observed.

"Cattle slaughter early this year was above the same months in 1960, largely due to the pressure of bigger inventories, limited winter feeds in some areas but good wheat pastures in others and prior commitments."

SHEEP—A strong seasonal upturn in lamb prices, which have held disappointingly low for some time, is indicated this spring, but, according to USDA, it no longer appears likely that prices will reach the level of a year ago.

Relatively low prices for lambs this year are due mostly to heavy receipts, but they also reflect a sluggish demand.

Sheep production has increased enough during the past 10 years to supply consumers with nearly the same quantity of lamb and mutton per person (4-4½ lb.), but demand, at times, has not kept up this pace.

USDA notes that a slow or belated price rise for lambs is not unusual. "Oddly enough, during the past five years, the highest monthly average price to producers for lambs has occurred once each in the five-month period of February through June," USDA says. "Late peaks are more typical of years when lamb feeding is large."

CORN

(Continued from page 1)

expressed to a member of the Senate Agriculture Committee.

There is some sign that the eclectic ideas of USDA will dominate the theories of the new secretary of agriculture.

In the interim December corn at Chicago looks cheap, but it is suggested that anyone watch the $1.23 high and act from there.

HATCH

(Continued from page 1)

year remained well above last year's for the first four months of the year, the cumulative difference dropped from an increase of 41% at the end of January to an increase of 19% at the end of April, with a further drop seen through May. February and March hatches both were a little more than a fourth larger than comparable hatches a year earlier. But the April, 1961, hatch of 103,350,000 was only 6% larger than in April, 1960.

It appears, according to incubator inventories May 1, that egg-type production this month will narrow even further the difference between the cumulative hatch of 1960 and of 1961. USDA's count of egg-type eggs in incubators May 1 indicates a possible decrease of 14% for the month compared with a year earlier, as producers react to low egg prices.

May 1 settings were down in all regions, most of them showing cuts of 10-20%.

For broiler-type eggs, the incubator count May 1 showed an increase of 11% from a year earlier. Only the east north central region had fewer eggs in incubators on the same date in 1960.

AFMA

(Continued from page 1)

lar importance to the feed industry."

Mr. Glennon called the new proposal and its supply-management technique "the most significant legislative proposal in the history of American agriculture." Although the AFMA does not take an official position on the bill, association members were advised that they "cannot afford to ignore the changes that are likely if the legislation passes in its present form." They were urged to study the proposal and advise their legislators of their views.

Noting that agribusiness likely could not remain uncontrolled if controls were developed for producers of various commodities as proposed, the AFMA analysis went on to say:

"The extension of controls to suppliers such as feed companies and to processors such as meat packers, broiler processors, etc., would almost certainly be seriously considered within a few years. In many cases it might prove to be simpler to control a commodity by regulating a smaller number of agribusiness firms than to attempt to regulate a much larger number of producers."

The analysis says that the authority to control processors and others engaged in handling of any agricultural commodity is included in the proposed legislations as follows:

(1) Allotting the total quantity or amount of any grade, size or quality which each handler may purchase or handle.

(2) Determining the extent of the surplus of any commodity, providing for the disposition of such surplus, and distributing the cost of such surplus elimination or control among producers and handlers.

(3) Each market order applicable to handlers must provide for each handler to pay his pro-rata share of such expenses as the secretary of agriculture may find are reasonable for the administration of the order.

No Official Position

The AFMA report states that the association legislative and executive committees and board have decided the group should not take an official position at the present time since the association does not primarily represent agriculture producers. However, as noted above, the association's covering letter accompanying the analysis states that members cannot afford to ignore the changes that are likely if the legislation passes in its present form.

The analyses also includes information on procedures for establishing new programs under the proposed legislation as well as data on market orders and quotas and price supports.

Sections of the analysis under the title "Expected Results If Bill Passes in Present Form," include: (1) More Power for Secretary of Agriculture, (2) More Government in Agriculture, (3) Secretary Could "Encourage" Producers to Vote for Controls, (4) Controls Would Likely Spread to Agribusiness, (5) Government Programs Not Likely to Solve the Agricultural Problem, (6) No Guarantee of Producer Income and (7) Higher Food Prices.

PURINA

(Continued from page 1)

ina)" regarding the broiler producing and processing business.

Purina denied any false representations in its dealings with Lack Industries.

After a week of trial proceedings in Judge Edward J. Devitt's court here, the jury ruled in favor of Lack Industries, a business operated by Ernest E. Lack of Minneapolis, who also operates Lack Game Farm.

Purina's legal representatives in Minneapolis indicated this week that the company "intends to make a motion for judgment notwithstanding the verdict," which would amount to asking the court to reverse the decision. If this request is turned down, a new jury trial on the same issues will be petitioned.

Purina Claim

The intended further action is the latest development in a case originally entered into federal court here Dec. 15, 1960, as a claim filed by Purina against Lack Industries.

Purina's claim said Lack Industries owed Purina $144,580, the total alleged indebtedness including $45,000 and $50,000, plus interest, due on two promissory notes, and some $36,000, including interest, in an unpaid account established by purchases of feed and other merchandise.

Court records show that Lack Industries delivered a chattel mortgage for the $45,000 loan in August, 1958, and for the $50,000 loan in February, 1959. The $36,000 which Purina said Lack Industries owed on account was accrued up to the fall of 1959.

Counterclaim

In its answer and counterclaim to Purina's petition, which was filed in January, 1961, Lack Industries alleged that it had sustained a net loss of $186,096.74 in the period from Aug. 1, 1958, through Oct. 31, 1960, "as a result of its actions upon false representations of the plaintiff (Purina)." Lack Industries asked the court for a $186,000 settlement and a jury trial.

Purina denied any false representations in its dealings with Lack Industries and denied that the company failed to disclose any necessary facts.

Lack Industries, which was incorporated and became a Purina dealership in 1958, alleged that "during 1958 Purina represented to Lack Industries that it could profitably operate a chicken processing business by purchasing feed from Purina and by entering into feeding contracts with broiler growers on forms prepared by Purina."

Lack Industries' petition also claimed that Purina said "the market price for chickens had averaged and would average 18¢ lb. and that feeding contracts had been profitable and could be profitable" to the Minnesota firm.

Plant Expanded

Funds loaned on promissory notes by Purina to Lack Industries were used primarily for expanding and equipping a poultry processing plant at Bethel in northern Minnesota, it was established. The processing plant was said to have been supplied with broilers produced by growers on contract with Lack, which furnished chicks and feed. Lack was reported to have had about 250,000 broilers on feed under contract agreements during the peak of the Minnesota firm's operation.

The jury absolved Lack from paying the promissory notes, feed bills and interest and awarded damages.

However, Purina denied having made any false representations and denied failing to disclose any necessary facts, and it was indicated that the court would now be asked to reverse the decision or grant a new trial.

In regard to trial of the case in federal court, it was explained that Purina had the choice of filing its suit in either a federal or state court. Hearing of the case in a federal court was justified in that the plaintiff and defendant were located in different states and the suit involved an amount in excess of $10,000.

K-STATE

(Continued from page 1)

than 10 years by the industries involved, for what was described as the world's most modern facility of its type.

Presentation of the Oscar Straube Scholarship House to the Kansas State University Endowment Assn. was made a part of the dedicatory program. James North, president of Nutrena Mills, Inc., Minneapolis, presented the deed to the house on behalf of the feed milling industry. Mrs. Straube was introduced at the ceremony, and it was explained that gifts from the late Mr. Straube's family and industry firms made possible the memorial to Mr. Straube. (Also see story on page 13.)

The dedicatory ceremonies were held in the university field house, and Orville L. Freeman, secretary of agriculture, was the principal speaker. The major portion of his address was devoted to an explanation of the Kennedy administration's farm program and a plea that the farmer be given a "fair hearing in his efforts to increase his income."

Persons attending the day's events were taken on guided tours through the university's newly completed building, with students in the milling department acting as guides.

Dr. Glenn H. Beck, dean of agriculture, presided at the dedication program. He thanked the participating industries for their contributions of money, machinery and services, and said that "the only thing that we need now to make this facility a success is students." Several millers brought high school students to the program and a special tour and luncheon were held for these graduating seniors, in order to interest them in enrolling in the feed and flour milling department.

Exchange Holds Picnic

SAN FRANCISCO—The San Francisco Grain Exchange held its annual picnic at the Hill Ranch in Sonoma County recently. Ernest Silverfield, Continental Grain Co., San Francisco, exchange president, reported about 60 in attendance. A steak barbeque climaxed the day's activities.

Chicks Placed in Principal Broiler Areas

(000's omitted)

Week ending	Maine	Conn.	Penn.	Ind.	Ill.	Mo.	Del.	Md.
March 11	1,170	404	908	777	130	722	2,092	2,046
March 18	1,229	468	928	854	80	749	2,138	2,186
March 25	1,242	434	861	893	101	842	2,172	2,427
April 1	1,214	494	815	891	126	823	2,276	2,582
April 8	1,263	533	868	967	104	850	2,124	2,632
April 15	1,234	512	915	972	120	787	2,250	2,583
April 22	1,209	520	989	884	167	807	2,121	2,638
April 29	1,140	508	985	970	162	862	2,156	2,665
May 6	1,206	467	788	846	143	811	2,309	2,390
May 13	1,209	473	831	895	119	905	2,228	2,330

Week ending	Va.	W. Va.	N.C.	S.C.	Ga.	Fla.	Ala.	Miss.
March 11	1,238	510	4,008	371	7,681	259	4,737	2,952
March 18	1,327	600	4,112	449	7,739	279	4,954	2,958
March 25	1,465	649	4,304	433	8,441	257	4,951	3,288
April 1	1,340	649	4,442	476	8,747	291	4,921	3,294
April 8	1,477	753	4,398	553	8,981	262	4,875	3,426
April 15	1,489	621	4,477	487	8,902	344	4,928	3,364
April 22	1,512	518	4,496	469	8,885	268	5,091	3,321
April 29	1,389	601	4,381	510	8,927	296	5,077	3,164
May 6	1,240	550	4,535	477	8,948	292	4,940	3,169
May 13	1,271	638	4,239	467	8,723	309	4,614	3,149

Week ending	Ark.	La.	Texas	Wash.	Oregon	Calif.	Total 22 areas 1961	1960
March 11	4,621	625	2,860	350	373	1,473	40,307	35,168
March 18	4,926	620	2,950	358	266	1,533	41,703	35,468
March 25	5,269	600	3,087	401	352	1,475	43,944	35,637
April 1	5,499	658	3,274	367	264	1,443	44,885	34,870
April 8	5,448	616	3,280	363	248	1,422	45,443	34,708
April 15	5,604	623	3,094	407	293	1,516	45,522	34,980
April 22	5,517	584	3,207	340	364	1,502	45,409	36,235
April 29	5,677	589	3,301	441	315	1,487	45,605	36,783
May 6	5,495	574	3,151	403	333	1,448	44,515	38,119
May 13	5,321	579	3,205	384	278	1,503	43,670	39,124

KANSAS

(Continued from page 6)

mixture of 65% alfalfa and 35% ground sorghum grain gave faster, more efficient gains than lambs on a non-pelleted mixture of 55% chopped alfalfa and 45% ground sorghum grain. The cost of the pellets made the gains more costly, however, when compared with the non-pelleted mixture.

Cobalt for Lambs—Cobalt failed to stimulate gains in lambs as well as in the cattle trials.

The value of wheat pasture as a source of cheap gains was emphasized in an 88 day trial with lambs. The lambs gained .42 lb. per day, and cost $2.63 per 100 lb. of gain.

Additional Reports

Other research summaries issued by Kansas State researchers at the time of the Livestock Feeders Day included the following:

Grain Sorghum as Silage and as Dehydrated Pellets—Grain sorghum which produced 85 bu. of grain or 9 tons of silage per acre was harvested as silage or dehydrated, ground and made into pellets. Both were fed as the entire ration except for the supplement. There was no difference in rate of gain (1.63 and 1.66 lb. daily gain). Increased feed efficiency was observed with the pellets when rolled grain was added to the ration. Either method can be used satisfactorily to harvest grain sorghum. However, less expensive methods of dehydrating and pelleting are needed.

Rolled vs. Finely Ground Pelleted Sorghum Grain—Rolled grain and finely ground pelleted sorghum grain were fed to two lots of Hereford steers. When the roughage was kept at the same level and grain fed free choice, the steers ate more rolled grain and gained slightly faster. However, those receiving pelleted grain produced gains much more efficiently. There were no significant differences in carcass value. The cost of pelleting tended to offset the advantage of increased feed efficiency.

Shipping Fever and Shipping Shrink—Fifty head of heifer calves, 25 control and 25 treatment, were used to study the effects of a tranquilizer injection on shipping shrink and shipping fever. These calves were randomly selected from a group of 85 heifers. At the same time, 110 head of steers were secured, making a total of 195 head of calves. Since all the calves in the shipment received the same transit treatment, the difference in shrink is not significant. Shipping fever did not occur in either the control or treatment group. The control group of calves required about 21 days to regain their initial pay weight of 428 lb., while the treatment group did not regain their pay weight, 443 lb., during the 30-day period immediately following shipment. Red blood count, packed cell volume and body temperature of the control group of calves remained higher for the entire experimental period.

Factors Influencing Profitable Grass Utilization and Sound Pasture Management—Wintering and Grazing Steer Calves—A soybean meal and salt mixture gave about the same response when fed to steer calves on winter bluestem pasture as the same feeds fed in block form. Both feeds were self-fed. Self-feeding nutrients in block form did not reduce the salt content required to control consumption of the supplemental feed. The value of supplying supplemental phosphorus to steers on bluestem pasture will be tested.

Factors Influencing Profitable Grass Utilization and Sound Pasture Management—Wintering, Grazing and Fattening Heifers—Due to a severe winter snow storm it was necessary to discontinue the original treatments under this project. During the following summer the value of supplemental copper, cobalt and copper and cobalt combined were investigated for animals being grazed on summer bluestem pasture. None of these treatments, in which the trace minerals were supplied in the salt at about half the required amount, gave a significant increase in gain over the controls. Tentative results indicate the trace minerals, copper and cobalt, are not limiting factors in summer grass gains on bluestem pasture. The original objective will be pursued the coming year, a comparison of feeding harvested roughages to calves on winter bluestem pasture with feeding the same roughage in dry lot.

Factors Influencing Profitable Grass Utilization and Sound Pasture Management—Wintering and Grazing Yearling Steers—The consumption of the following minerals and mineral mixtures by yearling steers on bluestem pasture was measured: salt; salt and bonemeal fed separately; salt and a mixture of salt and bonemal fed separately; the mixture was one pound of salt to two pounds of bonemeal. Bonemeal was about as palatable fed alone as mixed with salt. In most cases bonemeal at the rate consumed supplied only about one gm. of phosphorus per steer daily. A 20-gm. cobalt bullet (90% cobalt oxide) was administered orally to steers on bluestem pasture; no improvement in performance was noted over a period of 150 days. Cobalt supplied in bolus form as a 20-gm. bullet (90% cobalt oxide) administered orally did not affect performance of steers grazing bluestem pastures. When wheat pasture is available it will be evaluated as a feed for wintering yearling steers.

Factors Influencing Profitable Grass Utilization and Sound Pasture Management—Wintering, Grazing and Fattening Steers—Both diethylstilbestrol implants, chlortetracycline and a combination of the two proved effective in improving steer performance on high roughage rations and also over a period of one year which included a growing and a fattening phase. A combination of diethylstilbestrol implants and chlortetracycline has some value in improving performance of steers on a combination growing and fattening program. Gains were increased 0.16 lb. per steer daily or 53 lb. per steer for the year. This test is being repeated.

Cobalt Bullets or Cobalt-Fortified Soybean Oil Meal for Heifers—Supplemental cobalt was furnished to heifers either as cobalt bullets or as cobalt fortified soybean oil meal during a 170-day finishing period. Heifers receiving cobalt bullets did not show any significant improvement in average daily gain, feed efficiency or carcass grade when compared to controls. Heifers receiving cobalt in their protein supplement gained significantly faster, were more efficient and produced higher grading carcasses than control animals. All heifers received a sorghum grain, soybean oil meal and alfalfa hay ration.

Effect of Milling Processes on Sorghum Grain for Pigs—Pigs which were fed the dry rolled sorghum grain made the lowest daily gains. Those receiving the fine ground pelleted grain made the next lowest gains. Both lots had a low feed conversion figure. Where the grain was pelleted a poor response was made by the pigs in daily gains and in daily feed consumption.

Various Grains as Concentrates in Complete Pelleted Lamb Rations—Feeder lambs were self-fed pelleted rations consisting of 65% ground suncured alfalfa hay and 35% corn, sorghum grain, wheat, rye or barley. There was little difference in rate of gain during the 86-day period. However, lambs fed sorghum grain and alfalfa pellets consumed more feed and made slightly faster gains. Wheat and corn produced the most efficient gains. Because of high cost of wheat, cost per cwt. gain was high for lambs fed pellets containing wheat.

Preparation of Barley and Sorghum Grain for Fattening Lambs—Grinding and then pelleting sorghum grain or barley increased rate of gain, improved feed efficiency and slightly reduced feed cost. Lambs fed a grain mixture of one half whole sorghum grain and one half whole barley produced cheaper and slightly faster gains than lambs fed whole sorghum grain or whole barley.

Preparation of Self-Fed Fattening Lamb Rations—Lambs self-fed a complete pelleted ration containing 65% sun cured alfalfa hay and 35% sorghum grain gained .61 lb. per lamb daily and required only 640 lb. feed per 100 lb. gain. Those self-fed a mixed ration of 65% dehydrated alfalfa pellets and 35% whole sorghum grain gained .57 lb. daily and required about 700 lb. of feed to produce 100 lb. of gain. Feed cost was higher for lambs fed the mixed ration containing dehydrated pellets.

Dakota Mill Burns

HETTINGER, N.D.—Fire destroyed the P. A. Knutson pelleting and flour mill here.

Clarence Knutson, owner-manager, had no estimate of the loss of the building built in 1913, but said it would cost $150,000 to replace the mill.

Mr. Knutson said the feed plant portion of the building will be rebuilt.

SECOND FEED PLANT FIRE

DUBUQUE, IOWA—A second fire broke out at the Rooster Feeds Co. here recently, only hours after firemen had brought an earlier blaze under control. Damage was estimated at $5,000. Friction on a conveyor belt apparently caused the fire.

TOP OF THE HOPPER

(Continued from page 2)

keeping up with breeding, at least in broilers. He says that a great deal of progress has been made in breeding recently, and he fears that, unless continued efforts are made, nutrition knowledge and practice can lag behind the advances made in breeding.

Another comment in this connection may be appropriate, too. This same nutritionist points out that nutrition knowledge has become much more detailed and involved and complex. And many persons in industry will have to recognize that it is more complex and be willing to get more deeply involved in some of the fine points if they are to make use of the information which is becoming available.

A FEED MAN who is involved in an egg project in the Midwest claims that "amazingly" favorable results and low feed costs have been achieved in the production phase of the program. The feed firm involved supplies a "base mix" which the farmer combines with grain and soybean meal in a grind-mix unit.

STRESSING THE IMPORTANCE of proper nutrition for teenagers is the laudable aim of the National Food Conference in sponsoring an annual National Youthpower Congress. Nearly 200 young delegates attended the congress in Chicago and left the sessions fired up with ambitious plans to educate their respective communities. A number of food and feed companies and trade associations (including the American Feed Manufacturers Assn.) are listed among the National Food Conference members.

Anyone who has watched the kids sprint through the kitchen for a fast gulp or two before almost missing the school bus knows something needs to be done about it. Something is more likely to be done about it if the kids think it's their own idea, and this program obviously is using that approach on the "no time for eggs where's my book" crowd.

HERE'S SOME INCIDENTAL INTELLIGENCE: A lot has been said about the "bigger and fewer" trends shown in the agricultural census, but one also might note these figures: In our 50 states 30 years ago, about 637,000 farmers were raising about 17 million turkeys. In 1959, there were 87,000 farmers in these 50 states raising 83 million turkeys, and of these 87,000 farmers, 2,300 were raising between 70 and 80% of all turkeys. In 1949 in the U.S., almost 2½ million farmers were selling eggs; by 1959, only slightly more than 1 million farmers were selling eggs, and it is estimated that 50,000 of these were selling about two thirds of all eggs sold in the U.S. In 1954, almost 1½ million farmers were selling whole milk and cream; by 1959 this number had decreased to 1 million.

MARKETS

(Continued from page 2)

tops of $17.50 to $18 and demand for hog feeds has been fairly good. The same is true on poultry feeds and mills are running along on their usual 40 hour week basis; although in a few scattered spots, there has been a moderate reduction, but it is hardly enough to warrant concern.

Constituent feeds have been somewhat irregular with the high proteins along with bran and shorts inclined to either level off or weaken to some extent.

South Central

Some feed manufacturers indicate they think business turned down a bit this week but the majority feel that sales are holding at about the same level as the week earlier.

Mill operating time doesn't indicate much of a change as the plants continue to run on a five day basis. However, there are not very many orders piled up in advance at any of the mills, and running time is mostly on a hand-to-mouth basis.

Feed men say they are getting more complaints on prices, particularly on high protein feeds that carry the biggest advances. They feel that feeders are stretching out their supplements as much as they dare by the use of feed grains. Still, there is a limit on how much stretching can profitably be done and feed manufacturers voice no complaint over the quantity of hog supplements being moved.

Pig starters and growers are moving well and some mills may do better with chick starters this year than last. Prospects for any important increase in poultry feed sales appear dim though.

Ohio Valley

Following 50 successive days during which rainfall had been reported, ranging from scattered showers to heavy and widespread downpours, the Ohio Valley this week really was enjoying cool but clear weather. As a result there has been active resumption of long-delayed corn planting along with the beginning of the first seasonal harvesting of hay.

It has been thought by many area farmers, as the dreary rainy days dragged along, that the planting of considerable acreages of corn would have to be abandoned this year. But it is now believed that, in view of the improving weather, the potential valley corn crop will be about up to expectations.

Sales of formula feeds continued their slight but steady increase in volume during the last week with improvement being noted in demands pretty much down the line including turkey and other starter feeds, egg mashes and middlings for piglets. There also was such a strong demand for meat by-products that the available supply has tightened considerably.

Pacific Northwest

The region's formula feed business was still considered as being seasonally good, but there were indications that many purchases were on a hand-to-mouth basis as the reflection of unfavorable dairy and poultry feed ratios.

Rations for laying hens, fryers and turkeys continued to be the best movers with mild spring weather and excellent pasturage restricting sales of cattle and dairy feeds.

Oregon dairymen were cheered by the week end's passing by the Oregon legislature of a bill setting up the milk price floor at producer level. The bill still has to be signed by Gov. Hatfield, but State Director of Agriculture James Short says that everything is in readiness for appointment of an administrator and a 10 man board.

Milk industry observers believe it will be at least a month before a floor is set on producer milk prices.

Producer paying prices for eggs edged another 1¢ doz. higher at Portland during the week with AA extra large eggs finishing at 35 to 40½¢ doz. with AA large eggs closing at 33 to 38½¢ at nearby country points.

Mountain States

There is a mixed tone to the feed business in the Mountain States. Some report volume is off slightly and prices are steady to slightly weaker. Others report that volume is getting better and that prices are rising, especially on proteins.

All agree that cattle feeding is off due to an overflow of dressed meat on the market and cattle bringing only $22.50 to $24. But, it is felt that it is only a matter of time until the surplus is moved out and feeders will be back heavily.

Turkey feeding is picking up gradually.

Southern California

The formula feed business in Southern California continues extremely good volumewise with most mills working a steady five day week using a full crew and in many cases overtime, extra shifts and Saturday workdays are a reality.

In the heavy turkey producing areas feed volume is especially favorable as the birds begin eating larger quantities. Some turkey ranchers have already sold their birds for fall delivery at 19¢ lb. because several dealers foresee future price declines due to overproduction. Turkey growers in this area have lost confidence in the fall market, but in most cases these birds are being raised under a contract arrangement.

The broiler market currently is 13-14¢ per lb. f.o.b. ranch although birds from other areas, mainly in the Southeast, continue to be trucked into this territory and sold at prices down to 12½¢ per lb. Most producers are rather discouraged as this market shows a downward trend, particularly when the break even price to cover production costs is 16-18¢ per lb.

Some feed mills which have not been raising feed prices regularly due to early advanced milo bookings were finally forced to increase feed prices basis replacement costs of grain and proteins.

According to some cattlemen a good quantity of cattle will be ready for this market in June which will probably not help the local beef prices. Feedlot managers predict higher prices in the fall market.

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UNEMPLOYMENT

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going all the way. "That's why 6-7% of the country's labor force is unemployed," he said.

"Eventually, this will result in a revolution in all companies. More white collar workers will be organized in unions, there'll be a continued trend toward unions in management, office organizations will increase as employees seek more security, and industry will face a wide turnover in white collar people.

"To combat this, we must know the needs of the individuals we are dealing with, and how to reach them, and then how to deal with them."

Employee Security

"The key to meeting this problem is security, and that's what automation is disrupting. Employees want to know what's going on and why, ahead of time," he said.

Referring to the theme of his talk, "Industrial Relations, Past, Present and Future," Mr. Baird cited a three-stage cycle in employee relations that began back before the depression years. At that time, employers were in the driver's seat—jobs were actually auctioned off and sweat shops were prevalent.

"During the 1940's, industry men discovered that employees were humans instead of commodities. It had to make buddies of the employee, and these people took advantage of it.

"Today, we are entering the third stage of this cycle—a new era in industry, both socially and scientifically. This is a period of employer-employee communications where management must be fair, firm and honest."

Mr. Baird explained that his company has started a program of mass meetings to inform its employees about the economics of business, and what's good and what's bad for it.

"We must start thinking of how we're going to take care of employees displaced from their jobs through automation," he said. "It's industry's responsibility as well as government's."

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